

Bikes Etc

THE BEST ROAD GEAR RATED

INSIDE

50 PAGE
BUYER'S GUIDE

Reviews Etc

Welcome to BikesEtc's reviews section. Whether you're after a bike, kit or clothing, we've put the latest gear through its paces to help you find what's right for you.

PHOTOGRAPHY HENRY CARTER, JENN LEECH



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AND HOW TO GET
IT RIGHT **P.74**

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ReviewsEtc

Welcome to *BikesEtc's* reviews section. Whether you're after a bike, kit or clothing, we've put the latest gear through its paces to help you find what's right for you.

PHOTOGRAPH BY HENRY CARTER, JENNIFER LEISKEN



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BEST IN TEST



GOLD

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HERE'S HOW OUR REVIEWS WORK...

ReviewsEtc is your essential buyer's guide to the best road cycling products. Every month, we feature in-depth group tests of the latest bikes, clothing, components and accessories to ensure you're as well informed as possible when it comes to spending your cash. We know that making the right decision is equally important whether you're spending £10 on a pair of socks or several thousand on a new bike.

For each group test, we use an extensive set of criteria, including performance, ease of use, build quality and value for money. We take our time to come up with the best way to test every product, whether that means building a special rig to test pump pressure or standing out in a pitch-black country lane in the middle of the night to measure lighting beam patterns. Note that all weights and measurements are

taken from our own testing procedures, not from the details supplied by the manufacturer.

We then take the products out for road testing, riding, using and wearing them as thoroughly as possible on commutes, training rides and even in races, to see how well made and durable they are and how well they cope with real-world cycling situations.

Outside of our main reviews section, we also give scores for many of the other bikes and products we feature in the magazine. Although our First Ride bike tests are not as in-depth as our main reviews, we aim to give you an at-a-glance overview of the key features, characteristics and qualities of the bike based on our first impressions. Many of these bikes will then be subjected to full long-term testing to appear in group test reviews in a future issue.

THE RATINGS

Rating

ERGONOMICS

CONSTRUCTION

EASE OF USE

OVERALL

7

10

For each group test, we score the products based on a comprehensive range of criteria. There isn't space to give a full breakdown of the scoring, but we highlight the most important and relevant features so you can see in which areas each product performs especially well, and where its weak spots lie.

Giving extra weight to the most important features, we add up the ratings for each product and convert them into an overall score out of 10. Note that while two products may achieve the same overall score, they may be very different in key areas – see individual ratings for further detail.

THE AWARDS

BEST VALUE

Winners of this award may not have the highest overall score in their group test, and may not be the cheapest, but they will always represent especially good performance for their price.

BEST IN TEST

The overall winner in each test. Scoring highly in all criteria, this will be an excellent all-rounder, often with an extra something – a touch of style, a special feature – that sets it apart.

BikesEtc Gold Award

This award goes to bikes, kit or components with exceptional levels of performance and design. Don't expect to see it every issue – we only hand it out when it's truly deserved.

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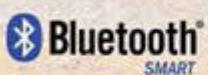
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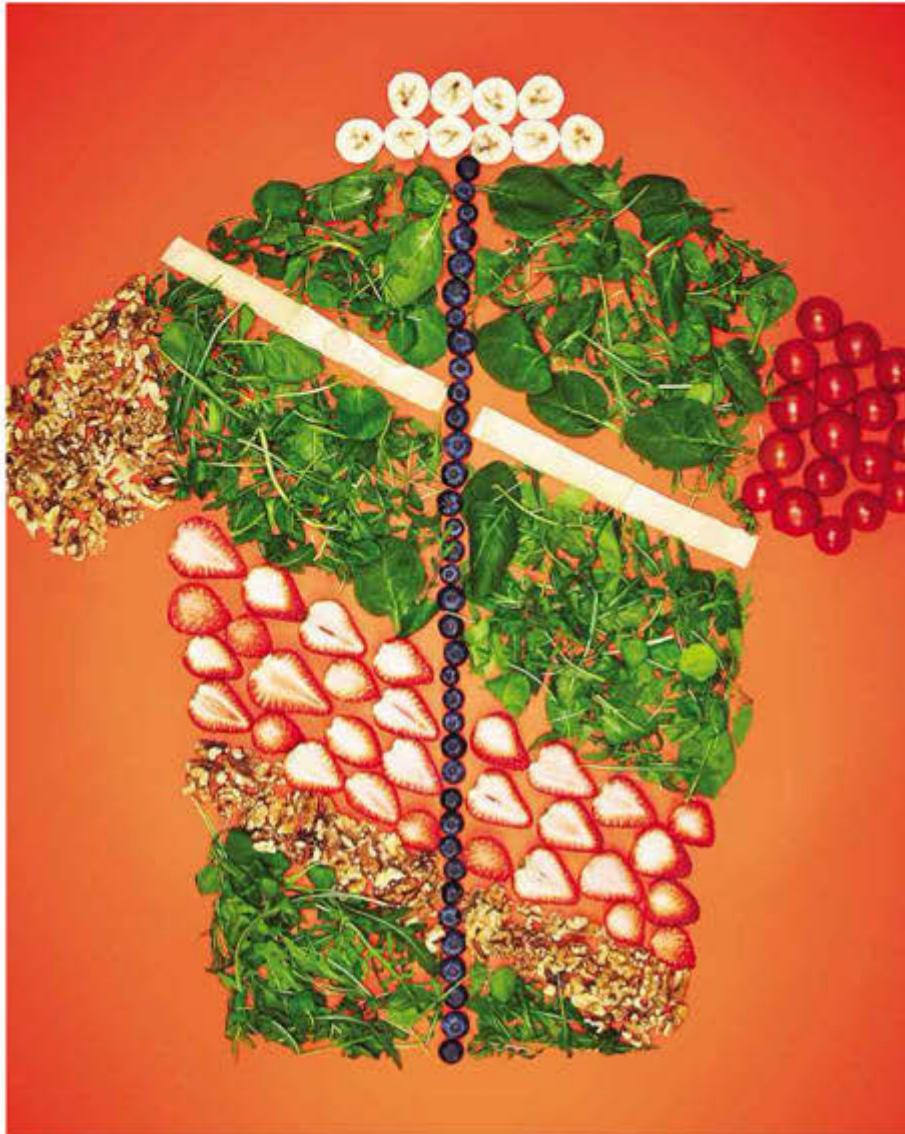
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ED'S LETTER



'Hats off to our testers, in particular the hardy soul who tested bibshorts in less-than-ideal conditions in Scotland'



Wesley Doyle, Editor

BikesEtc
Issue 006 / April 2015

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FIRST RIDE

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13 INTUITION GAMMA

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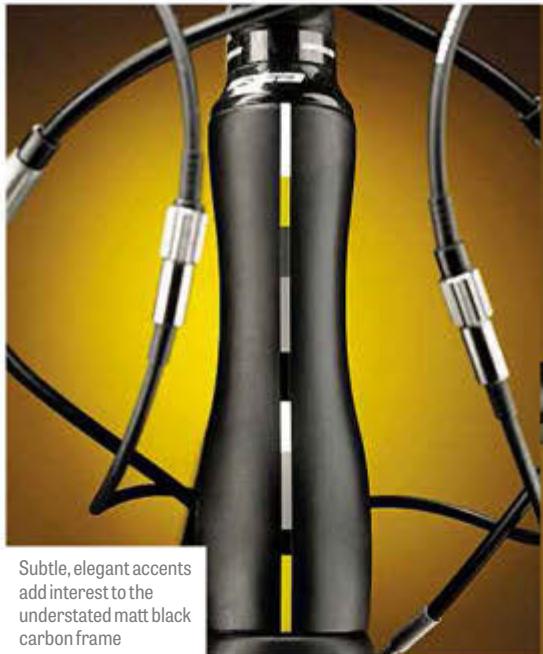
R

ubbing shoulders with the respected Boardman brand on the Halfords shop floor, 13 Bikes is a range of performance-focused road bikes that are sure to become a common sight on the UK's roads. You may recall the

entry-level Intrinsic Alpha featured in issue one; here we have Intuition Gamma, the top-of-the-range model featuring a Shimano Ultegra groupset, a taste for aerodynamics and an understated appearance befitting a ride far above its £1,800 price tag.

For want of a better word, the Intuition Gamma looks badass. At a guess, the designer's influences comprised a Lamborghini, a B-2 stealth bomber and the Batmobile. The absence of colour and loud branding on a matt black carbon frame screams aerodynamics and speed. Discreet upside-down 13 logos are a nod to racing history, the tradition of pinning the unlucky 13 race number to your jersey upside down to reverse the associated curse. The only hints of colour are in the unconventional but elegant white, grey and gold detailing.

Brakes are positioned behind the fork on the front and beneath the chainstays on the rear to minimise air resistance, while internal cable routing completes the frame's clean look and aerodynamic credentials. The combination of the bike's aero and



minimalist design means it wouldn't look out of place in a high-end boutique beside highly priced bespoke custom-builds.

Consistent with the frame, the Intuition Gamma is equipped with performance-driven components but, as you'd expect on a bike of this relatively modest price, some compromises have been made. The 120mm stem has a negative rise that ensures an aerodynamic riding position when slammed to the headset. The 11-speed Shimano Ultegra groupset performs excellently, as expected, however the brakes are not Ultegra and on our test bike we felt they lacked bite. Our 185cm (6ft 1in) rider welcomed the extra length the layback seatpost adds to the 56cm (size large) frame but found the chunky metal branded plate on the seatpost at odds with the bike's light weight and aero concept – a sticker would have sufficed – and felt the spongy Fizik seat didn't seem quite right on an otherwise aggressive bike.





At a guess, the designer's influences comprised a Lamborghini, a B-2 stealth bomber and the Batmobile

The thing that strikes you as you take that first roll down the street is the aerodynamic sound emitting from the wheels. Tastefully branded, they look and sound like an expensive deep-section carbon wheelset, but are in fact typical 24-hole alloy rims with deep-section carbon fairings for aerodynamic performance. Although not as light as true carbon rims, this mixed-material design does offer a better braking surface and more durability.

To road test the Intuition Gamma, we set out for a day with Steve Abraham on his attempt to set a new record for a year-long time-trial. For the majority of the 192 miles we covered, we stuck to A-roads, where the bike proved very comfortable. In addition to the strong aerodynamics, it feels stiff and light, with little flex round the bottom bracket. On the flat with your head down, the bike feels and sounds like a TT bike, just without the tri-bars. It would be more than capable on any fast-paced club run.

Less can be said for the bike's performance on country lanes in bad weather; the slick tyres gave us a few slippery moments on greasy corners. Furthermore, the carbon fairings fill with water in

the rain and the purr of aero wheels is replaced by the sloshing of a washing machine, and the wheels become heavy. The rims also seemed to suffer from lateral flex. Presumably as a result of spokes loosening after a few rides, a loud clicking could be heard from the rear wheel as the alloy rim flexed and the carbon fairing clicked back into place with each hard turn of the cranks – annoying but hopefully nothing 20 minutes with a spoke key couldn't fix.

In the Intuition Gamma, 13 Bikes has created a stunner with the looks of a bike three times the cost. But that is where the comparison ends. Despite credentials such as the Shimano Ultegra groupset and aero design features, the performance of the bike doesn't live up to its elite appearance. It seems 13 Bikes has pushed to get the Intuition Gamma into the Ultegra category but at the expense of the quality of the seat, wheels and brakes – we think the excellent Shimano 105 would be a more than adequate choice of groupset. Average brakes and imitation carbon wheels aside, the bike is excellent value for money and even if it doesn't ride as well as a pro level bike, it sure as hell looks as good. 

Internal cable routing helps make the slick frame more aerodynamic

Frameset: Ultra Grade carbon, full carbon fork with tapered steerer

Wheels: 13 RS Aero deep section

Tyres: Vittoria Rubino Pro III, 23c

Groupset: Shimano Ultegra 11-speed, 53/39 chainset, 11-25 cassette

Bars: 13 RS Aero

Stem: 13 RS +/-⁰

Seatpost: 13 RS alloy

Saddle: Fizik Aliante Delta MG

Brakes: TRP T822/T820

Weight: 7.72kg

Price: £1,800

Contact: halfords.com

Rating

STYLE

HANDLING

VALUE

OVERALL
6
10

SCOTT CONTESSA SOLACE 25

Scott proves that female-focussed bikes can look fantastic and ride just as well

PRICE: £1,699
WEIGHT: 8.02KG SIZE:S

W

hat is it about 'women-specific' frames that has troubled us to date? Despite the research and debate, we've often felt that the whole concept of is a bit like juicing – sure, you get a nice drink, but to get there you've had to strip out a lot of the good stuff that nature has evolved over millennia.

At times we've felt that women-specific bikes are made to look and feel decidedly practical in comparison with more striking unisex bikes, perhaps on account of the broad spectrum of end users. Is it simply that such a vague category is incompatible with style and performance? For most of us, male or female, looks are unquestionably a major part of bike riding. Just as we were about to give up all hope, in rolls the Contessa Solace 25. This female tester was startled. This is a bike she liked instantly and without reserve.

Solace is Scott's endurance-oriented range, claiming to offer 'the perfect balance of performance and comfort'. Scott has long proved itself a major advocate of women's cycling and it marks its intention here by calling the women-specific version the Contessa – the countess, the female elite. But it's more than just a name: Scott has taken all the best attributes of a unisex bike and tailored them to a woman's proportions and requirements, some of which are certainly aesthetic, some poetic and some defiantly technical.

The Contessa's HMF carbon frame (designed to be stronger and stiffer than industry standard) has what Scott describes as two zones: power and comfort. The first of these, the power zone, comprises a tapered head tube, a wholesomely sized down tube, a chunky bottom bracket and asymmetric chainstays. These are shaped together to hint at the flow of power through the frame. The language of serious biking is maintained through these design elements, while bold block

'When you're on form it's akin to piloting a cruise ship rather than a freighter'

colours and colour-matched forks are added, and the cables are routed internally.

Comfort is catered for by the shorter top tube and taller head tube, a narrow seatpost and the slender seatstays, which are unencumbered by their usual supporting role for the rear brakes – instead, the calliper is moved under the bottom bracket, into the shadow of the chainrings. The thinking here is that by removing the burden of supporting the brakes, the seatpost inherits a little more flex and comfort. The unusual position of the rear brake was initially unsettling, and though we have heard



Words: Aleda Fitzpatrick

Scott has succeeded in making a women's frame that's by no means daintier, just perfectly tailored



Rating

UPGRADEABILITY
LOOKS
THE RIDE

OVERALL
8
10

Frame: Solace carbon, comfort geometry, 1.125in fork

Wheels: Shimano WH-RS11

Tires: Schwalbe Durano, 25c

Groupset: Shimano 105
11-speed

Seatpost: Syncros WR1.4
Woman carbon/alloy

Saddle: Syncros Women Road
Endurance

Bars: Syncros RR2.0 Woman

Brakes: Shimano 105

Price: £1,699

Contact: scott-sports.com

stories of brakes in this position rubbing the wheels on other bikes, in practice we had no problem with braking performance on the Contessa.

All in all, when you ride this bike you immediately understand what 'stiff' and 'power transfer' mean. That chunky bottom bracket and oversized down tube remain resolute with every pedal stroke, with absolutely no loss of effort. Because of the directness of the power transfer, it's not so satisfying on a bad day, but when you're on form it's akin to piloting a speed boat rather than a freighter. We'd be interested to try the disc brake version of the bike for the benefit of sharper braking on rainy rides, but the 105 brakes were fine. The seatpost, saddle and ride position are comfortable and we felt elevated from any road buzz, with very little stress coming through

the bars. Perhaps the proportions of the bike had something to do with the enjoyment. It doesn't look or feel immediately like a girls' bike, by which we mean smaller and daintier. In fact, it feels like a genuine adaptation of established formula to suit a particular style of riding and rider – in this case, one who happens to be female – and we really do believe that Scott has tapped into the female psyche to nail both the aesthetics and feel of the bike.

This is a high-quality frame for a rider who knows how to use it. And one to which value can be added: replacing the wheels, bars and groupset will be worthy upgrades in the long run. But it's perfectly agreeable from the outset. This thing has power, is comfortable, rides well at speed and puts its potential well within the rider's grasp. 



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HOTLINES
[STRONG PRODUCTS]



ENDURA FS260- PRO SL

The emperor's new bibs or a new cycling wardrobe essential?

PRICE: £100 CONTACT:
ENDURASPORT.COM

Since the birth of the bicycle the best and wealthiest cyclists could afford to have their machines tailor-made to their own measurements. It's still the case today and although most of us squeeze our own physical peculiarities on to a bike that's been designed around the belly of the bell curve, there's a vibrant cottage industry catering to those wanting to go down the custom path.

With the increased uptake of professional bike-fitting services, there has been a growing appetite for custom shoes. Many are now heat-mouldable (pop them in an oven, shape them to your feet, cool and ride) and some bike-fitting operations offer custom-moulded insoles that work within your current shoes.

All this makes sense. Intuitively making the transition between human and machine as seamless as possible is a no-brainer.

So why has it taken until 2015 for anyone to offer custom-fit cycling shorts? As the seat is one of only three contact points on the bike (the others being pedals and bars), tailored chamois have been a long time coming, and to our knowledge Endura is the first to fill that gap with its FS260-Pro SL bibs. These are available in sizes XS to XXL, in two leg lengths (standard or long), and with three pad widths – narrow (green), medium (red) or wide (blue). What's more, head along to a fitting centre – as we did when we visited London's CycleFit – and you can sit on a sensor-equipped saddle to point you towards the best fitting pad. This led to some surprises, in our case a narrow

Making the transition from human to machine seamless is a no-brainer

pad even though we're normally described as stocky. But hip width and general bulk have little effect on how your sit bones sit, so on-bike fitting is the best solution. This requires you to ride your own bike and saddle on a stationary trainer, shifting position from tops to hoods to drops to build a picture of where pressure is distributed. Typically we'd have chosen a medium size, pad and length, but we left CycleFit with shorts in the medium size but with a narrow pad and long length.

The shorts are every bit as good as you would hope of a premium product, with quality grippers, comfortable straps and flat seams. At £99.99 including fitting, they're competitively priced for a somewhat bespoke product too. At present, CycleFit (cyclefit.co.uk) is the only fitter for the FS260-Pro SL, but more will be added in coming months – check endurasport.com for updates.

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SCULTURA range from £599.99 to £1,600 (model shown £1,600)



SCOPE R5C WHEELS

Roll up the Dutch

PRICE: £1,198 (PAIR)

WEIGHT: 770G/950G

(EXCLUDING SKEWERS)

CONTACT: SCOPECYCLING.COM

Just a couple of years ago, you'd have needed to part with two grand to secure full carbon aero wheels for use with clincher tyres. There wasn't much choice either, but things have changed drastically. Dutch manufacturer Scope, supplier to the unfortunately named continental team Baby-Dump (it loses something in translation) is the latest in an increasingly busy market. Each of its initial range of three wheels comes in at under £1,200. Designed for high speed across flatter terrain, the R5c is the aero option, with 55mm deep rims. Its on-trend 24mm width means it'll

lend larger volume tyres a better profile, further improving aerodynamics and handling.

Unlike some smaller manufacturers, Scope developed its own hubs and freewheel mechanism. This means its wheels are designed as a complete system, freeing them from the limitations of a stock hub and allowing features such as rear straight-pull spokes laced in a 2:1 pattern (two spokes on the drive side for each one on the non-drive side). While they look the part and are relatively affordable, their price isn't a long way off offerings from far bigger names. We'll see how they compare in a future issue.

BONT BLITZ SHOES

Race-ready shoes fresh from the oven

PRICE: £180 CONTACT: BONT.COM

Along with cleaning bike parts in the bath, cooking your cycling shoes in the oven is one of the more unusual indignities you can inflict upon your partner.

While Bont offers cheaper models featuring oven-ready heat-mouldable technology, its new Blitz shoe also has Boa fastening and a woven 3k carbon sole – all the key features that have made Bont shoes popular among the pros but at a more affordable price.

Also available in white, neon pink or blue, they're designed for speed, with a slim foot bed and low 3.6mm stack height to keep your feet close to the pedal spindles for maximum power transfer.

Their slightly bulbous toe box is the result of Bont's belief that the majority of cycling shoes are made according to lasts that are biomechanically incorrect, with most brands using models designed for walking, not cycling. While this might give them attractively pointed fronts, like a dress shoe, they'll also constrict your toes, potentially causing discomfort and sapping efficiency. By comparison, Bont has created its own design, which provides plenty of wiggle room.

Considering Bont has a sideline making shoes for the rough-and-tumble world of roller derby we'd be disappointed if these couldn't stand up to some serious abuse.



VELOTOZE SHOE COVERS

Everybody's going
for those kinky boots

PRICE: £15 CONTACT: VELOBRANDS.CO.UK

One of the biggest obstacles facing newbie road cyclists is having the confidence to go out in public wearing kit that leaves little to the imagination. These new overshoes from Velotoze compound the anguish by being made of latex, making them look even more like fetish-wear than standard Lycra garb.

Created by keen cyclists from northern California, which enjoys cool, wet winters (more like our early spring), Velotoze shoe covers are designed to keep feet warm and dry down to 5°C. Being rubber, water- and windproofing is a given, and the stretchy fit forms a snug seal around your calf, so there's less chance of water dripping in down your leg. And for those who care about such things, the lack of zips, Velcro tabs and so on means they're pretty aerodynamic too – and that they don't have any parts to break or fall off.

Thin, flexible and light (106g), they easily fit in a jersey pocket so, in theory, are useful in changeable weather. In reality, this depends on whether you mind the faff of putting them on mid-ride – the recommended method is to slip your socked foot inside first, roll them up your leg, put on your shoes then roll them down over the top. The definitely-not-recommended method is the one attempted by a *BikesEtc* staff member, who tried to put them on over his shoes like conventional booties before giving up in frustration. Always read the instructions, kids.

As well as boring black, red and white, they also come in truly *fabulous* lime green, toxic yellow and fuschia pink. Three sizes accommodate feet from a dinky 37 to a not-all-that-large 45.5 and there's a shorter-length version that stops below the ankle. If you can overcome the feeling that your feet are clad in a gimp suit, we reckon they could be handy in the spring conditions we're looking forward to riding in soon.





VENTOUX BAGS

At last, a holdall that holds all

TRAINING CAMP BAG PRICE: £95

EVENT BAG PRICE: £60

GYM BAG PRICE: £60

CONTACT: VENTOUX-WEAR.COM

Let your memory be your travel bag. So said bearded Russian novelist Alexander Solzhenitsyn, though we'd wager he wasn't trying to cram everything he needed for an inclement sportive into an undersized holdall at the time. The memory of fellow riders rolling their eyes when you ask to borrow something takes the lustre off reminiscing past glories.

British clothing company Ventoux knows this, which is why last year it launched its custom bag range – designed for cyclists by cyclists, apparently. The one that'll probably be of most interest to *BikesEtc* readers is the Event, designed for one or two days of riding. Ingenious features include: two insulated pockets that can hold four 750ml bottles (or two bottles and two post-ride beers), food, bars and gels; a tool pocket with loops to keep everything tidy; and another pocket for sundries. The main 60-litre space can hold everything you need for a weekend's riding including shoes and helmet, and there's a waterproof outer pocket for inevitable post-ride wet kit. The main flap has space for documents such as a map or race number.

The Gym bag is a smaller version (28 litres), ideal for when you can rely on the weather and don't have to take so much. The Training Camp Bag is a monster at 114 litres and comes with wheels and a handle for longer, far-flung trips. Thanks to the dedicated compartments, these bags take away the worry that you've forgotten something – which is perfect if you're Russian to get out of the door. Sorry.



RAPHA PRO TEAM SOFTSHELL BASE LAYER

Protection from the inside out

PRICE: £80 CONTACT: RAPHA.CC

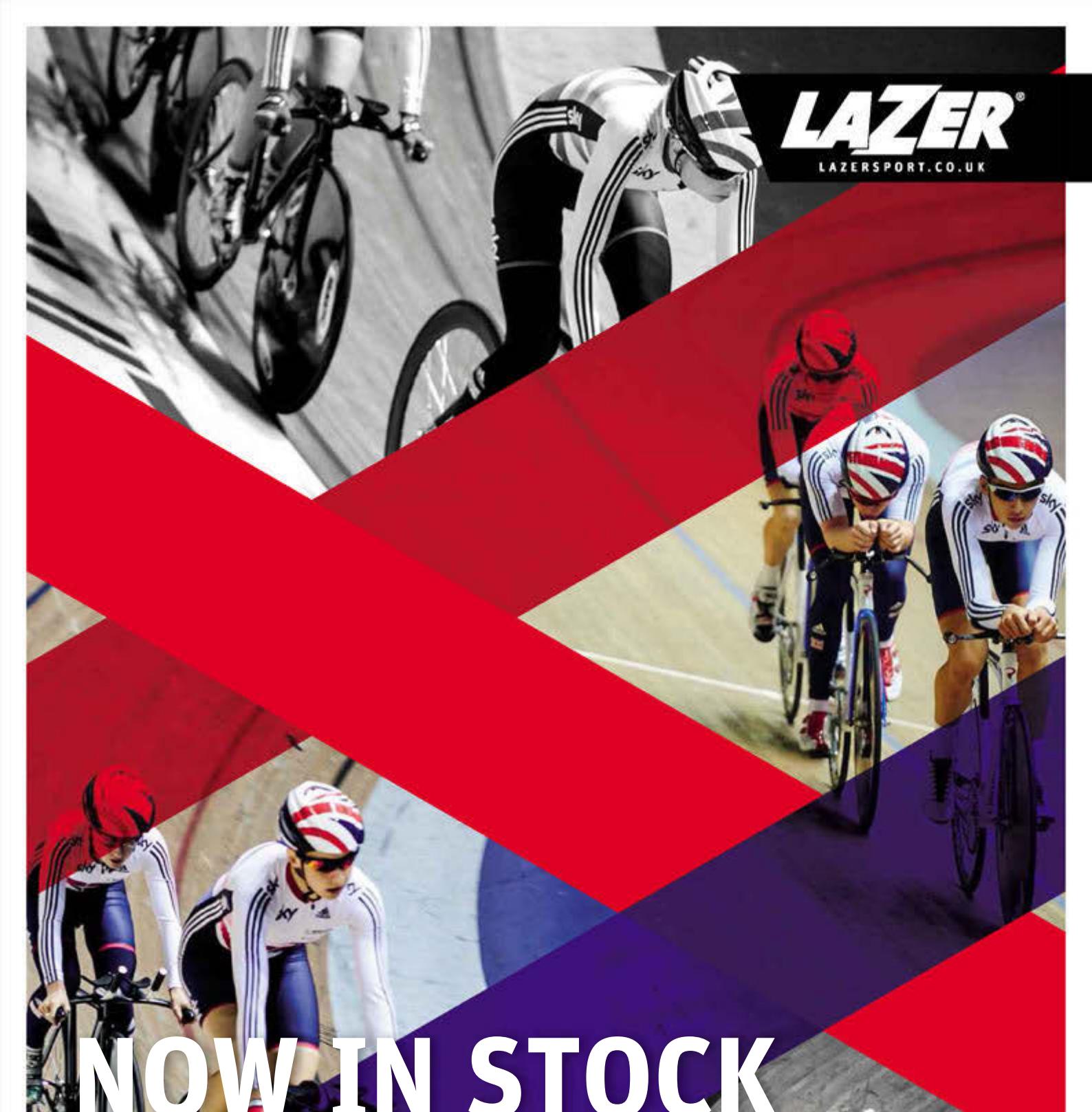
The first splotches of rain used to send the peloton retreating en masse to retrieve waterproofs from the team cars. Not any more. For the benefit of those watching on TV, the UCI recently made clear it intends to enforce a rule requiring riders' team kit to remain recognisable at all times.

Team Sky shouldn't have any trouble displaying their colours while also keeping warm thanks to a new base layer that takes the water- and wind-resistant properties typical of an outer shell and places them against the skin. 'This transforms a standard jersey into an all-weather garment' explains Graeme Raeburn, lead designer at Team Sky's clothing supplier Rapha.



Intended as the perfect undershirt for Froome and Wiggins during colder races, Rapha believes the technology isn't just good news for image-conscious pros: 'Improvements in technology, particularly in stretchy yet weatherproof fabrics, are opening up new categories of product,' says Raeburn. 'We're now able to send riders out with less clothing while still keeping them comfortable across a broad range of conditions.'

Reducing the number of layers necessary and expanding the usability of existing garments is part of an effort to slim down not only cold-weather clothing but also the number of items in the average cyclist's wardrobe – leaving more room for replica team jerseys. #



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Départ

SWITCHBACK switʃ.bæk / noun

Mountain road with many hairpin curves. Ability to negotiate will be hugely improved by reading p33



jazz

What you want to be listening to if you think you're coming down with something (p31). We recommend a bit of Miles Davis

52.7km

TOTAL DISTANCE OF COBBLES RIDERS WILL FACE AT THE 113TH EDITION OF PARIS-ROUBAIX ON 12 MAY. WATCH SIR BRADLEY WIGGINS (P34) ATTEMPT TO WIN IN HIS FINAL RACE FOR TEAM SKY ON BRITISH EUROSPORT

741,000

The number of people who regularly ride to and from work. Find out how to transform your commute from a fare-saver to a form-trainer on page 24.



102

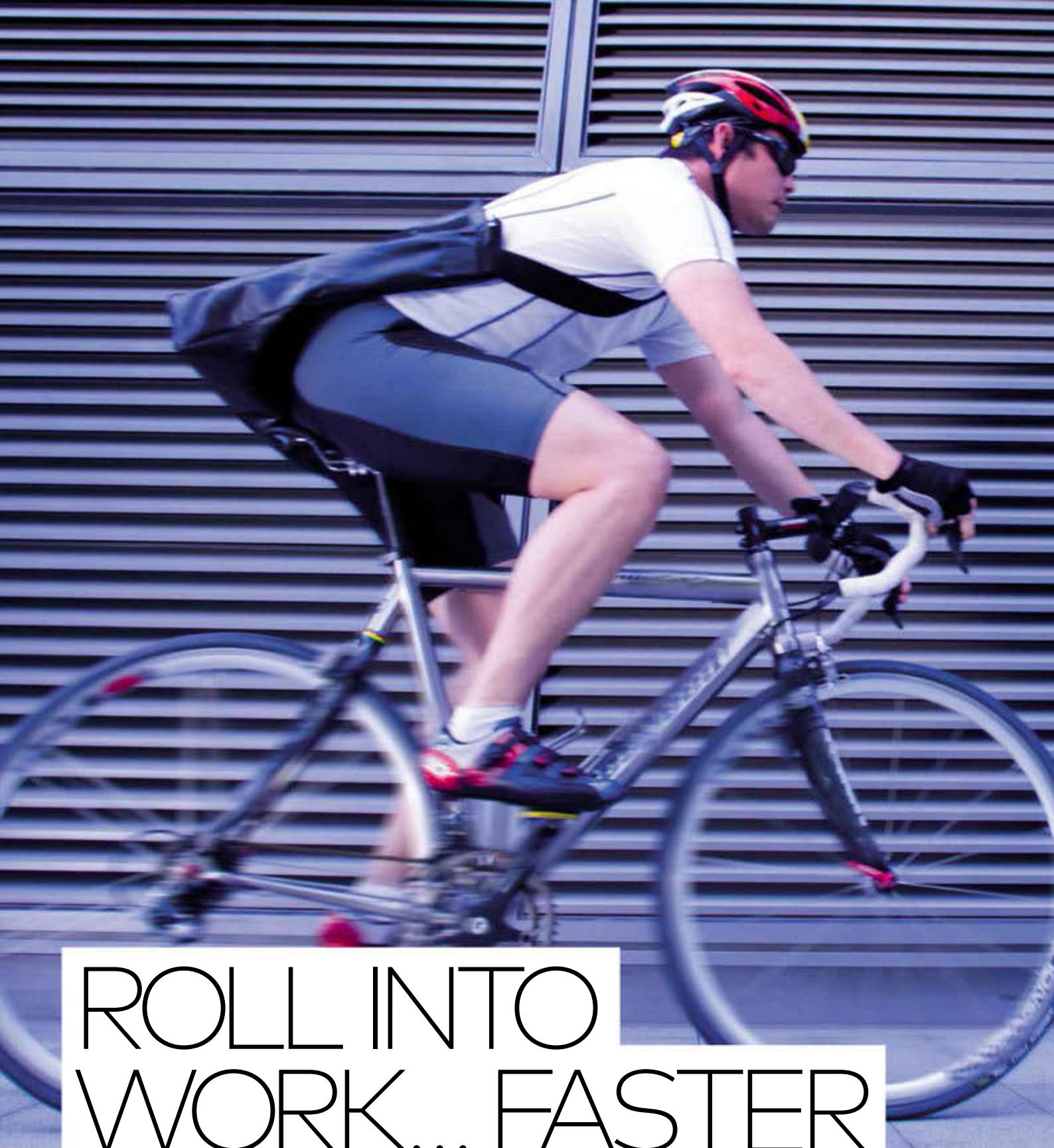
Frenchman Robert Marchand's age when he broke his own world Hour record (over-100 category). Add bodyweight training (p28) to your regime and you too could be riding around with a letter from the Queen



COTTON

The original material for handlebar tape. The stuff on your bike now is more likely to be polyurethane but either way, replacing it is a skill. Learn how to do it like a pro mechanic on p26





ROLL INTO WORK... FASTER

With just a few tweaks to your daily ride to and from the office, you can morph into a recreational Froome dog. Now that's productivity

The National Cycle Network now stretches over 14,000 miles and passes within a mile of half the homes in the UK. Aligned with the government's bike-to-work scheme, increasing fuel costs and a questionable public transport system, an increasing number of us are cycling to work. For onlookers, even cycling just five miles a day is impressive. For cyclists, however, commuting's often seen as dead miles. But with the clocks ticking forward an hour, now's the time to add specificity to your commutes for big fitness gains – and that starts with mixing it up.

'Variety stimulates the greatest improvements,' says endurance coach Mark Kleanthous. 'If you

ride at one pace, you become world-class at that pace. And if you ride hard all the time, you'll simply become fatigued.'

So instead of cycling, for instance, the six miles to work at the same intensity, be creative. Play around with pacing over individual commutes, and follow Kleanthous's three speed sessions opposite. Of course, how these should be integrated into your week is fitness-dependent. You could do one of them on one leg of the commuting journey and take it easy on the return. Or you could do two one day, easy the next, then two more the day after. The most important thing is that over the week you don't become a one-pace pony.

WORK IT!

ENDURANCE COACH MARK KLEANTHOUS PRESCRIBES THREE SPEED SESSIONS TO SLIP INTO YOUR COMMUTE. YOU'LL NEVER BE LATE FOR A 9AM MEETING AGAIN...



SINGLE-SPEED BENEFITS

If your ride isn't hilly, use just two gears to cycle to and from work. In a tailwind you'll improve your fitness by spinning a high cadence; in a headwind you'll have to work harder and so increase strength. As you improve, only use one gear to work and one gear home. Repeat this each week and see if your revs-per-minute variety has made you a better cyclist.



SPRINTING BURSTS

Every 5mins of your commute, sprint for 1min. This means 4mins recovery. Ensure you use the same gear for the full 5mins. Do up to 10 of these during the ride. It'll feel uncomfortable to begin with and then possibly too fast as the minute is up. But that's good. It develops strength, speed and the ability to cope with fatigue all in 1min.



WAIT FOR GREEN

OK, this is an all-out strength session with a focus on safety. At a set of traffic lights, simply pull away in a high gear and pedal to around 80rpm. It's a great blast of strength but please: only do this when there are no hazards.

COMMUTING IN NUMBERS

The last UK cycling census was in 2011. Figures showed...

741,000

People who regularly cycled to work

90,000

Increase from the last census in 2001

109

Percentage increase of people cycling to work in Brighton

30

Percentage of workers in Cambridge who commuted by bike

0.3

Percentage of employees who cycled to work in Merthyr Tydfil – the lowest in the UK

'You could cycle two miles easy, two hard, two easy,' explains Kleanthous. 'Or one mile easy, one mile hard and do that three times. Or even one mile easy, half-mile hard, half-mile easy four times over. You can even ride to work as fast as you can in the easiest gear. The choice is yours.'

It's a pacing strategy supported by Richard Sanders of Sustrans, a charity that promotes sustainable transport. 'I used to ride around 10 miles each way, each day, and it made me neither quicker nor better at riding long distances. I wasn't doing any speedwork and that was a mistake.'

MANAGING YOUR TIME

It was a mistake from a performance point of view. From a health standpoint, even the single-pacers will benefit over taking the bus. Kleanthous is a vocal advocate of commuting by bike and has coached athletes to cycle around the world by making them commute to work and back for 18 months before their travels. He's calculated that even if you cycle to work and back just once a week, you can burn around 500 calories, which equates to losing 3kg in a year. 'That rises to 9.3kg if you commute three times a week,' he adds.

Of course, that's only true if you stick to some commuting fundamentals. The first revolves around nutrition. Most of us will cycle to work off the back of a strong coffee and nothing else. That's

fine if the commute's under, say, one hour but any more and it's certainly worth scoffing a banana or energy bar before or during the commute. On arrival, and as long as your office manager isn't too militant, a bagel with peanut butter or jam will provide slow-releasing carbs and protein to not only replenish fuel burnt in the morning but refuel for the commute later in the day.

'You should also consider your bike set-up,' says Sanders. 'My long-ish commute, riding with a rucksack, combined with all day at a desk, gave me chronic backache. Ironically, this got in the way of riding. Now I'm more careful about how I sit on the bike, as well as carrying less on my back and raising my monitor slightly higher.'

Unlike Sanders, you could go for tried-and-trusted panniers, and if you're really short of time and a long weekend ride doesn't fit in with your lifestyle, just slipstream the advice of Matt Bridges – Sanders' colleague at Sustrans. 'My commute is six miles but I regularly throw in longer or hillier rides home. In fact, because of family commitments, it's the only way I can squeeze in a true endurance ride.'

By varying the pace of commutes, you'll reap the benefits at either your target event or in the form of a shrinking waistline. However, with 19,000 cyclists injured on the road each year, please do your best to stay safe. Sermon over.

WRAP IT UP

Sharpen up your bike with a tape job a pro mechanic would be proud of

Nothing looks quite so fast or pro as a bike decked out with crisp white bar tape, a fact not lost on manufacturers who also love to strap it to their consumer models. However, while it's alluring in the showroom the real reason it screams professionalism and speed is because, deep down, we know it's not really for the likes of us who don't have a team of dedicated mechanics to replace it when a rainy ride or oily hands have made it a grubby mess. While pros with black tape might get their bars reupholstered every few stages, white tape is likely to get changed as regularly as a rapper's Air Force Ones. Pretty it may be, but when a new team livery is revealed to include white-wrapped bars, you can hear the team mechanic's groans.

Luckily, even in boring black, a fresh wrap of tape is an easy way to revive a tired looking bike. Learning how to apply it yourself is easy and satisfying in an arts and crafts kind of way. Just follow our steps below.

TIME TAKEN: 30MINS
WORKSHOP SAVING: £18



Get ready

Make sure your hands are clean. Remove the tape from the box. Place the two short strips of tape (to go behind the levers), scissors and electrical tape within reach. Roll the brake lever hoods forward and remove the old tape. Ensure the exposed cables are securely attached to the upper part of the bar using electrical tape.



Start at the end

Take the first roll of tape and remove about a metre of the backing strip. Poke an inch of tape into the end of the bar. Holding it down with your finger, give it one complete inward twist around the outside of the bar, leaving around 5mm overhanging the end.



Honour the magic 8

Keeping the tape under even tension, begin winding it around the bars. Each pass should overlap the previous by 8mm so that the adhesive strip is contacting the bar and not the tape. As you approach the levers, attach one of the short pieces of tape to the back of the fixing band.



Now for sleight of hand

Overlap the bottom of the lever body before bringing the tape above the lever and across so it overlaps the short strip of tape. Roll back the hoods. None of the bar or lever body should be visible. Once you reach the point where you want to finish, pull the tape past the handlebar and cut it diagonally across the end.



Make ends meet

Wrapping the last stretch of tape should leave you with an edge perpendicular to the bar. Secure this with electrical tape. Push the overlapping tape into the bar end and tamp the plug into place.

PRO TOUCH

Tricks and tips for advanced wrapping

- It's crucial to maintain even tension on the tape while applying it – this is what keeps it in place.
- Bin the sticky-backed strips that stop the ends unravelling; pros use electrical tape instead.
- Tape without using the strips that fill gaps behind the levers: wrap in a figure eight up the inside of the lever and over the

- top before once around the base then outside of the lever body.
- Extra dense tape can lessen the jarring effect of cobbled roads: S-Wrap Roubaix Wide Tape (£18, specialized.com).
- Leather tape is both stylish and hardwearing. It's not cheap though: try Brooks Leather Tape (£245, extrauk.co.uk).



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BODY MATTERS

Using your bodyweight as resistance will not only increase strength on the bike, but also reduce injuries. Here's the plan

As cyclists we love to feel the air rushing through our hair (or over our balding crowns), revel in speed and absorb the invigorating countryside. So relatively static off-the-bike work can feel like a chore.

'Regardless of what level rider you are, everyone can benefit from integrating bodyweight exercises into their weekly plan,' says Elliot Lipski, sports scientist at cycle coach company TrainSharp. 'Obviously they increase strength but studies have also shown they can virtually halve overuse injuries.'

ANYTIME, ANYPLACE

Cycling is a linear sport. Plant your buttocks on the saddle, keep your upper body still and pedal with an efficiency that would impress David Millar. Great for increasing speed, but repetitive motion on a singular plane will reveal weaknesses. 'Cycling isolates several muscle groups that take huge strain – the glutes, hamstrings and knee flexors in particular,' says Lipski. 'Work on these and you'll become structurally more sound, increase resistance to fatigue and improve pedal economy.'

The great thing about bodyweight exercises is that you don't need to set up a £60-plus direct debit to David Lloyd. From the comfort of your home, local park or even office you can spend as little as 20mins a week on exercises such as those shown below.

And, while all-year-round bodyweight exercises are the ideal, don't be deterred if you feel that's unrealistic. 'If you have a sportive coming up, we'd say you need to start eight weeks before the event,' adds Lipski. 'Do two sessions each week lasting 10-60mins depending on your training schedule.'

Lipski says if you have a moderate-intensity ride lined up the same day, a short bodyweight session is fine. He also stresses that squats, specifically single-legged, should be core to your plan: 'The move not only strengthens the supporting muscles around the knee, but also core cycling-specific muscles. It's a positive compound movement.'

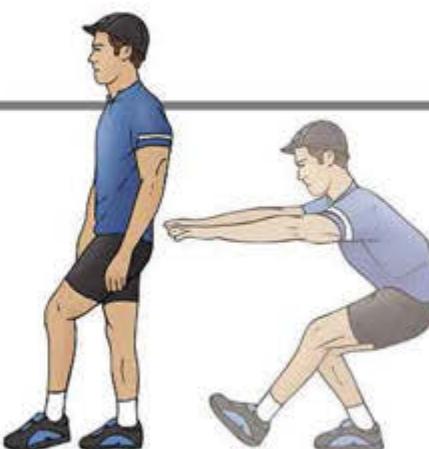
MULTIPLE BENEFITS

Compound movements are the time-starved cyclist's dream ticket. They hit numerous muscle groups because you're performing multi-joint movements through a wide range of motion. It's why step-ups will benefit you, especially with a leg drive at the top for a power boost. You can also increase difficulty by raising the height of the step.



BODYWEIGHT EXERCISES

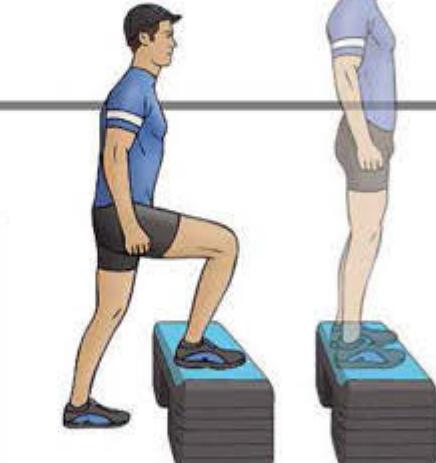
Do these four moves in sequence. Start with five sets of 15 reps each, building up to 10 sets, with 60-90sec recoveries



1

1. SINGLE-LEG SQUAT

Balance on one foot with the other foot raised in front of you. Squat down, with your weight through your heel, keeping the elevated leg off the floor. After 15 reps, repeat on the other leg.



2

2. STEP-UPS

Stand in front of a step or bench and place your left foot firmly on the step. Push your body up until your left leg is straight, driving for extra power. Once your right foot hits the step, step back down and repeat.



DEFY THE AGEING PROCESS

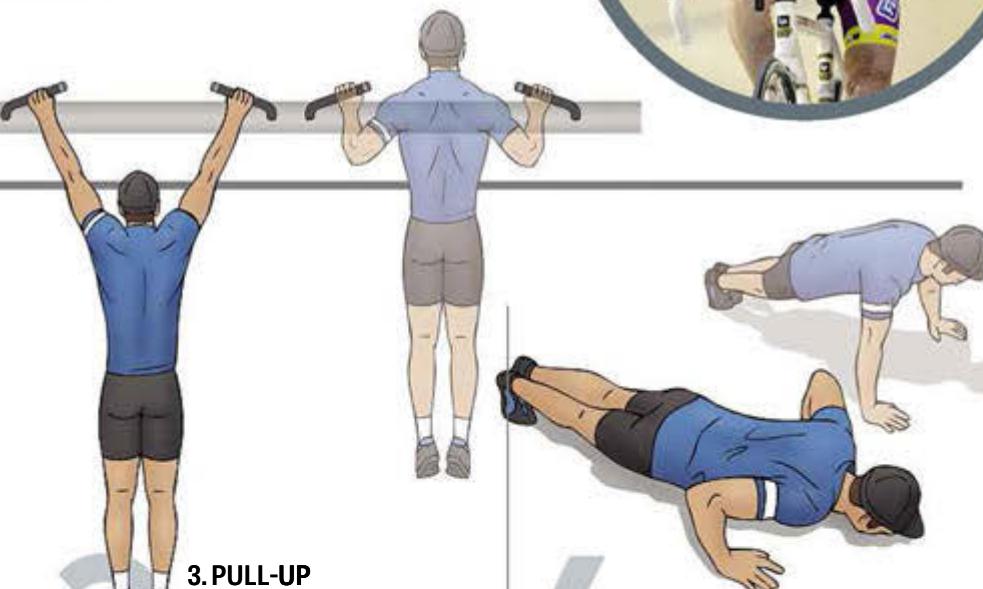
Up to your 30s, muscles grow larger and stronger. Then, inevitably, muscle mass and function decreases. The inactive can lose 3-5% of muscle mass per decade. As active cyclists, it's less than that but you can avoid triceps that ripple with saggy skin by strength training. Bodyweight exercises stimulate your endocrine system to produce strength hormones including testosterone and human growth hormone, reducing age-related muscle decay.

Follow a bodyweight plan and you might match the exploits of Frenchman Robert Marchand who, in 2014, broke the Hour record with 16.7 miles. It's not up there with Rohan Dennis but Marchand was 102 at the time. But was it legal? 'If I had doped, maybe I could have gone over 20mph!' he joked at the time.

Working on the core as well is a given (see *BikesEtc* issue four for core exercises), but while cycling-specific muscles should be targeted first, you shouldn't ignore your upper body. Your shoulders and arms absorb significant stress over a 4hr ride, so treat them with respect not neglect. 'Press-ups and chin-ups will strengthen the pecs, deltoids and lats,' explains Lipski. 'For chin-ups, you can always go all Rocky and use a tree branch.'

Form is key, so ensure you practise technique – ideally have someone spot you to begin with. Speed of exercise matters, too. 'The concentric movement should take 1-3secs with the eccentric a touch slower. It encourages the muscle to work under great load and so elicit greater benefits.'

Essentially, concentric contractions are those that cause the muscles to shorten and usually involve a movement that fights gravity (eg the lifting part of a pull-up or press-up); eccentric is the opposite (the lowering part). But whatever the terminology, a modicum of bodyweight training will power up your performance.



3. PULL-UP

On a bar or branch with palms facing away from you and hands shoulder width apart, lift your chest up until it touches whatever you're hanging off. Lower your body slowly and repeat.

4. PRESS-UP

In a prone position, place your hands shoulder-width (or slightly wider) apart. Keeping your torso, legs and head straight, simply raise and lower your body.

OUT OF THE SADDLE #2

SNOW BOARDING

Boost your cycling with a spell on the white stuff: it's strength work, altitude training and a mighty rush all rolled into one



Despite its Olympic credentials, it's easy to dismiss snowboarding. It's just sliding. That's a bad holiday, not a sport. And snowboarders aren't athletes, right? They just jump off things then call each other gnarly.

But after your first day on the piste you'll feel like you've spent the day in the gym. Snowboarding is all about working your legs – not just the quads but your hip flexors, hamstrings and calves, all things that tighten from riding. You'll be doing hundreds of squats as you push against the snow, get off the chairlift and make turns down the slopes.

Stomach, back and intercostal muscles constantly contract and relax to ensure you don't catch your board edge on the snow. If you do plant your coccyx, you'll need to do a loaded sit-up to get up again. A strong core helps you retain a stable posture on the bike, decreases lower back pain after hours in the saddle and helps you climb and accelerate faster.

Focus is needed as you think ahead and plan your lines while moving at speed down crowded runs; useful practice for bunch riding. Also, a short hike carrying your board through soft snow at altitude will force your aerobic system to work hard, preparing you for the same mountains on the bike – once the snow has melted.

Words and illustration: Ben Spurrier

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RIDE OUT GERMS

Goodbye echinacea and a trough full of vitamin C – cycling's the best medicine you can take. Just don't overdo the intensity

You clip-clop your way through the office, look around and raise a wry smile at your sedentary colleagues wiping mucus from their raw noses. Since you've taken up cycling, those bouts of flu have become a thing of the past. You've lost weight, increased muscle and seemingly morphed into Robocop.

'Those who cycle regularly show lower reported incidences of illness, infection and disease,' says David James, professor of exercise science at the University of Gloucestershire, who specialises in endurance sports. And a study in the *British Journal of Medicine* found that a group of 1,002 adults over a 12-week period experienced symptoms of upper respiratory tract infection (URTI) – a common cyclist's ailment – for 21 days. However, those in the top 25 per cent for fitness, who exercised for five days or more each week, experienced 43 per cent fewer days with symptoms (nasal discharge, coughing, fever) and that these symptoms were less severe.

BODY AND MIND

How cycling boosts the immune system isn't clear but studies have shown exercise boosts production of macrophages, white blood cells that attack the bacteria that trigger an upper respiratory disease.

Regular cycling also reduces levels of stress hormones such as adrenaline and cortisol, and there's a clear link between stress and reduced immunity. That doesn't just manifest itself in physical wellbeing

but in mental health, too. Exercise releases endorphins, the chemicals in the brain that serve as the body's natural painkillers and mood-lifters, identified as a key hormone in the fight against depression.

CROSSING THE REDLINE

So that's it: mount your Boardman, head down and ramp up the bpm to maximum? No. 'We monitored Bradley overnight and this morning, and after consultation with the doctor, we've withdrawn him from the Giro.' The words of Team Sky chief Dave Brailsford at last year's Giro d'Italia, confirming that Brad Wiggins's tumultuous race had been curtailed by a URTI. Despite Team Sky's infection-fighting regime, including taking their own sheets and mattresses to each race, Wiggo's system was beaten by days of immunity-busting climbs.

'Even in trained individuals, it's well established that high-intensity exercise can result in impaired immune function for up to three days after the exercise bout,' says James. In fact, high-intensity exercise longer than 90mins has been shown to depress the immune system, creating what's known as an 'open window' of decreased protection, which is when viruses or bacteria can gain foothold. James goes on to say that scientists haven't been able to directly show the link between immune suppression and infection risk – it's hard to prove in the lab – but sometimes anecdotal feedback such as that in Wiggins' case is evidence enough.

IN A 12-WEEK STUDY, ADULTS WHO EXERCISED FIVE OR MORE DAYS A WEEK REPORTED 43 PER CENT FEWER DAYS WITH SYMPTOMS OF UPPER RESPIRATORY TRACT INFECTION



Then again, Wiggins could have suffered through nutritional issues. 'Carbohydrate feeding and hydration is known to attenuate the impairment of immune function after heavy exercise,' adds James. 'That's likely down to the reduction in blood glucose concentration and associated insulin and stress hormone response.'

GIVE YOURSELF A BOOST

So what can you do? Building up fitness gradually is a good place to start, so no shocking the body with a weekly 90 per cent max burst if that's your only training session. Highly coloured foods such as red pepper, kale and sweet potato are high in antioxidants, which have been shown to fight infection. You should ingest 60g of carbs per hour during rides of more than 60mins to keep blood glucose topped up. Hydration is also key – not only to stimulate metabolic processes, but also through lubricating and protecting the airways. There are also the tips in the box, right, to bulletproof your immune system. And if that doesn't work, well, you can always watch the spring Classics from your sick bed.

DEFENCE MECHANISMS

Three tricks to boost your immune system even further

■ It's proven that washing your hands regularly, avoiding hands touching your mouth and eyes, good-quality and a good amount of sleep, no sudden reduction in weight and keeping away from large crowds are key ways to reduce risk of infection,' says Professor James.



■ In addition, it seems post-ride massage isn't just beneficial for easing tired muscles. 'Massage pushes out toxins and stimulates a positive immune response from your nervous system,' says Wells-based osteopath Benjamin Palmer. 'Massage also relaxes you, and the less rundown a cyclist is, the less likely they are to catch a cold.'



■ And if all that fails, you could always listen to a spot of John Coltrane. Research shows that listening to 30mins of jazz boosts the protein immunoglobulin, which defends against infection. Nice.





FIANDRE NORAIN

Make puddles fun again!



Photo: Taylor Tulip-Close

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GET AHEAD OF THE CURVE

Position your bike and body correctly and you'll turn quicker and more reliably than a Scalextric

Cornering is one of those skills that done properly will save you time, breed confidence and have you consuming that post-training bacon sarnie content in the knowledge that Valverde has nothing on you. Get it wrong and, well, you could easily end up in A&E.

'The key is to keep your centre of gravity as low as possible so, ideally, your hands should be on the drops but also nice and relaxed,' says Mark McKay, endurance coach for Scottish Cycling. 'And you should also ensure that you manage your speed.'

That sounds obvious but it's still something the professionals wrestle with. In 2003, Joseba Beloki of the Once team entered stage nine of the Tour de France 40secs behind Lance Armstrong in the overall classification. On a downhill corner, shadowed by the American, Beloki locked his rear wheel under braking; the tyre came off on the scorched tarmac and Beloki lost control, crashing heavily. The Spaniard's broken body ended his race while Armstrong swerved past, over a sun-drenched field and, ultimately, to victory (that lasted nine years).

Braking as you approach the corner rather than as you go through it will help you maintain momentum to accelerate once the road begins to straighten. 'That's one option,' say McKay. 'There is another. Rather than brake early, you can feather your brakes through a corner so you're regulating speed nice and smoothly.' Be warned, though: this isn't one for disc brakes.

POSITION PERFECT

Your inside foot should be in the 12 o'clock position, with the outside foot at six o'clock. As you lean in to the corner, just press down a bit firmer with the outside foot. That extra push can add much-needed traction and is particularly useful if racing criteriums – those multi-lap short-course races often held on closed city centre streets.

As for further body position pointers, it's back to McKay. 'You want to be sat balanced in the centre of the saddle, arms slightly bent, not too stiff in the shoulders and your head upright, looking at the exit as that's where you'll hopefully be heading,' he says.

That raises the issue of bike position. If it's a tight left-hander and you're riding in the UK – and it's safe to do so – you can reduce your turning angle by moving out toward the centre line markings, before cutting into the apex of the corner and heading out toward the middle on exit. This allows you to maintain greater speed – but, to reiterate, you

'Feathering your brakes through a corner will help regulate your speed'

should be 100 per cent sure it's not too hazardous.

Conversely, when approaching a right-hander, stay left on the approach before moving in toward the middle of the road at the apex and then drifting left again on exit. But be warned: never overtake on a corner. It's damn dangerous.

HILL CORNERING

Of course, that's all very well on the flats of Norfolk but what about down a foreboding monster like Sa Calobra in Majorca, which features sheer drops either side and a multitude of hairpins?

'When you're cornering downhill, you want to be in as big a gear as possible,' says McKay. 'It removes some slack from the chain so that it's not bouncing about. You also want to brake that little bit earlier than you would on the flat, stay a touch more upright and ensure you're really on the money when it comes to regulating speed.'

As for uphill, though he's no Quintana or Froome, heed the advice of Team Sky's sprint king Ben Swift. 'In Europe there are a lot of hairpins and the inside is often the steepest part,' he says. 'You can keep wide, which is flatter but longer. However, if you come into it wide and hit the apex, you can almost be slungshot out of the corner, which is good for both speed and morale.'

Cornering well is all about developing the necessary skills. Ensure you put in the practice and remember to cover left- and right-handers.

TURNING WITH AEROS

If midweek time-trials are filling your 2015 calendar, you may well attach a pair of clip-on aero bars to your road set-up or, if you're particularly frivolous with your Visa, purchase a TT bike. Either way, you'll be facing the corners with the added obstacle of being stretched out on aero bars.

Here you have a choice. You can retreat from that stretched-out position so your hands cover the brake levers – though if you have bar-end shifters and you can see you'll need to pick up speed, shift down a gear or two first. The other option is to stay on the aero bars, which is fine if you can see out the other side of the corner and know you're not going to brake. Again, be sure that it's safe to do so as aero bars are trickier to handle.





KNIGHT RIDER

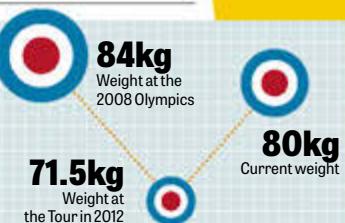
Plain-speaking, style-savvy, two-wheeled legend... what's not to love about Wiggo?

As Britain's first true superstar cyclist, Sir Bradley Wiggins CBE is as well known for his outspoken views and love of Mod fashion as his exploits on the road and track. Ahead of his bid for glory at Paris-Roubaix this month, the launch of Team Wiggins and his assault on the Hour record, BikesEtc looks back at the highlights from an illustrious career...

12

PINTS PER DAY WIGGINS REPORTEDLY DRANK AFTER THE 2000 ATHENS OLYMPICS WHEN HE ACQUIRED A TASTE FOR BELGIAN BEER

Wiggins is known for his ability to put on or shed weight to suit whichever discipline he is focusing on at the time...



OLYMPIC MEDALS

Sir Wiggo is Britain's joint most decorated Olympian, with seven medals – the same number as Sir Chris Hoy, and one more than rowing great Sir Steve Redgrave.

GOLD

Time trial 2012,
Individual pursuit 2008, 2004,
Team pursuit 2008

SILVER

Team pursuit 2004

BRONZE

Madison 2004,
Team Pursuit 2000

PROFILE

FULL NAME

Bradley Marc Wiggins

HONOURS

OBE (2005),
CBE (2009),
Knighted (2013)

AGE

34

DATE OF BIRTH

28 April 1980

HEIGHT

6ft 3in

NATIONALITY

British

BIRTHPLACE

Ghent, Belgium

NUMBER OF PRO WINS

27

GUITARS

Wiggo is an avid collector of guitars. He once told a reporter that the one he would save if his house burnt down would be his ebony Gibson ES-335.

Pictures: Getty Images

501

Average speed ridden to win the UCI Road World Championships Individual Time-Trial 2014, beating 2013 title holder Tony Martin of Germany by 26 seconds.



FOOTBALL



IT COULD ALL HAVE BEEN SO DIFFERENT...

in his youth, Wiggo was a decent footballer and had junior trials for West Ham. Seeing Chris Boardman win gold at the 1992 Olympics was what first got him interested in cycling.

Number of comments under the Daily Mail story reporting Wiggins being photographed smoking while on holiday after the 2012 Olympics.

215

Fred Perry

Get the look with the iconic brand's Bradley collection: cycling shirt (£70), track jacket (£95), city trouser (£95).



TEAM TIMELINE



2001
Linda McCartney
Racing Team



2002-03
Française
des Jeux



2004-05
Crédit
Agricole



2000-07
Cofidis



2008
Team
HighRoad



2009
Garmin-
Slipstream



2010-15
Team Sky



2015
Team
Wiggins

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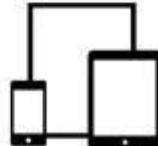
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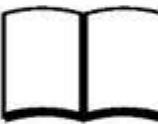


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ON TEST



BMC GRANFONDO
GF02 DISC £1,700



NORCO SEARCH
CARBON £2,300



GT GRADE ALLOY X
£1,500



WHERE THE ROAD ENDS

If you followed 2014's bike show coverage, you can't help but have noticed the emergence of gravel bikes – road bikes for off-road. A bit like cross bikes then? Well, sort of. We took three to the Peak District to see if they made sense

WORDS **MATT PAGE**
PHOTOGRAPHY **ANTHONY PEASE**

S

o what's the point of these gravel bikes then? Aren't they just cyclocross bikes?' We hadn't even finished unloading them before the inevitable question was asked.

The term 'gravel bikes' comes from the USA, a country with thousands of miles of unpaved roads. So a bike specific to those conditions makes sense. In the UK – where gravel roads are practically non-existent – not so much.

The three of us meet in Buxton, the highest market town in England and the gateway to the Peak District, to see if there is a place for them here. Our excursion has been plotted using Google Maps and Street View, which doesn't exactly fill us with confidence as we look at the route on screen. 'We head along this road, but Street View stops here so I don't know what it's like after this.' Hopefully our bikes are more capable than the camera cars. A plastic bag full of inner tubes is passed around, almost as if punctures are inevitable. This is not to be a normal ride; it already has the feeling of an adventure and the weather is going to make things interesting as well, with snow covering the higher peaks.

As the bikes are assembled, I can't help hopping on and messing around with the



Peaky blinders: our luminous gang heads for the hills to see if gravel bikes can cut it on Peak District terrain



THE ROUTE

Distance: 93km Climbing: 1,934m

Time: 5-6hrs

Leave Buxton, heading northwest on the A5004. After 2.5km turn right on to an unclassified road, follow Old Road as it heads off sealed roads intermittently until you reach the edge of High Peak village. Head back south around Fernilee and Errwood reservoirs (1) and on to the one-way system up Goyt Valley. The route follows minor roads and the former railway line of the High Peak Trail (2). From Darley Dale the route heads northeast on small, unclassified roads and green lanes. Pass through the Chatsworth House estate (3), riding through Edensor Village. At the 70km mark (you'll need to walk



down some steps to reach it), join the Monsal Trail (4) and follow until the Pennine Bridleway leaves at 82km. Follow the bridleway, then unclassified lanes, finishing back in Buxton.
strava.com/routes/1485546





Norco. Never before have I started riding a bike with drop handlebars and immediately tried to pull a wheelie. It feels fun, nimble and exciting. Soon after, tyres are pumped up to 60-70psi, headsets are tightened and bolts are given a once over, ready to ride.

Defining features

So what makes it a gravel bike? Take one disc-braked road bike, increase the tyre clearance so that tyres up to (or beyond) 40mm can be fitted, and slacken the angles a touch to make it more comfortable and at ease when off-road. It sounds a bit like a cyclocross bike but there are subtle differences. A cyclocross bike will have a higher bottom bracket and is aimed specifically at the demands of racing for one hour off-road, with features such as a lower gear range or even a single front chainring, whereas these gravel bikes are designed for big days of mixed terrain.

Chris is riding the GT Grade Alloy X, one of the first bikes specifically for the gravel market. Next to the lucid green BMC that Andy is riding and my bright yellow and blue Norco, the GT blends into the background with its 'pre-loved' finish. The big difference with the components is the slick 28mm tyres fitted to the GT. Given that our route has sections away from sealed roads, will it survive?

The Norco Search demands attention. The most expensive on test by a margin, but also the only bike with a carbon frame and by far the best equipped. It's hard to knock its spec, from the Ultegra 11-speed drivetrain to hydraulic brakes and Clement X'Plor 35mm tyres, which is a brand popular with cyclocross racers.

In normal riding circles, the BMC Granfondo GF02 would be the standout bike, but with the Norco in our trio it is edged to second. The bright green matt finish on the BMC's aluminium frame does a good job of making it look like carbon. Just like the Norco, it has been fitted with 35mm lightly treaded tyres, but it's the only one to have mechanical disc brakes.



A PLASTIC
BAG FULL OF
INNER TUBES
IS PASSED
AROUND AS IF
PUNCTURES
ARE INEVITABLE



BMC GRANFONDO GF02 DISC

This acid-green frame houses equally standout components

Summary

With its heavily manipulated aluminium frame, you'd be forgiven for thinking the GF02 is carbon like its more costly sibling, the GF01. It's a sleek-looking bike with slender seatstays that aid comfort and plenty of clearance for big tyres. We chose a 54cm frame for our 1.77m rider.

Best points

The Shimano 105 drivetrain provides a great gear range – 34x32 is adequate even on steeper off-road climbs and 50x11 was more than we needed. The tyres roll fast on the road, providing enough volume to soak up the rough stuff and giving surprising grip when needed. The brakes are flawless – there's life in cable discs yet.

Worst points

The GF02 is no lightweight, and though it's not noticeable when you're riding, we'd prefer lighter wheels. The use of standard quick-release raised eyebrows – why not bolt-thru axles? – but we experienced no brake rub.

Price: £1,700

Frame: TCC aluminium frame, Compliancefork pure carbon fork

Wheels: DT Swiss X1900

Tyres: Continental Cyclocross Speed, 35c

Groupset: Shimano 105 11-speed, 50/34 chainset, 11-32 cassette

Brakes: Shimano R517 mechanical disc brakes, 160mm rotors

Handlebar: BMC RDB 3

Stem: BMC RST 3

Seatpost: Compliancepost, pure carbon with TCC

Saddle: Selle Royal Saba

Weight: 9.62kg

Contact: evanscycles.com



Rating

FRAME

COMPONENTS

THE WHEELS

THE RIDE

OVERALL

8.2

10



As we leave Buxton, heading north and uphill, I start to wonder if we might be taking on too much. A standard 95km ride on the road would normally be four to five hours with a few stops, but with lots of off-road diversions and having to navigate, who knows how long we will be? Less than 2km in, we shoot off the main road; a no-through-road sign warns of what is to follow. As the grade steepens, patches of snow appear, the tarmac ends and the road turns into a mess of rocks. Stopping, we look back at Andy. ‘This way?’ we ask, pointing ahead, as if there were any alternative. We pick our way up the rocky climb, our expectations already exceeded. This is far from a gravel road but the bikes shoot up with relative ease. Care when choosing a line is needed, and there’s a little scrabbling for grip here and there, but the bikes feel eager and keen to push on.

The rocky section doesn’t last too long and the road continues, intermittently surfaced. But it doesn’t take long for a problem to arise. On the first downhill my rear brake fails, so we stop to look at it. No fault of the bike itself, but a human error, namely fitting the brake without enough fluid. With hydraulic brakes, nothing can be done while on a ride, whereas you have a fighting chance of roadside repair with cable-operated brakes. I’m not about to call it off, though: it was a three-hour drive to get here. Who needs two brakes anyway? Well, we’ll see.

We turn and head south towards Goyt Valley and, after a few miles of flat terrain on the road, any thoughts of being on chunky tyres are soon forgotten.

The wide tyres glide along quickly and with none of the drag we expected. A chunky, heavier tyre should be slower, right? That’s just physics. Handy, then, that Chris happens to be a research physicist.

‘For rolling resistance, the most important factor turns out to be not the width of the tyre, but how much the tyre deforms under load,’ he explains. ‘Narrow tyres have a small radius, so to form a flat patch on the road you have to deform quite a big portion of the tyre a significant amount, whereas a wider tyre requires less squish over a smaller area. And less squish means less wasted energy.’

The bikes’ playful sides are keen to come out. While we are not riding mountain bikes, we certainly have a sense of being able to tackle anything. The higher we climb, the more snow we have to deal with and by the top we are down to riding through two icy car tracks. Then, just as we think it’s challenging enough, the hail starts: small spikes of ice blown sideways at speed into our faces is uncomfortable to say the least.

As if by magic, the moment we start heading downhill the hail stops and the dark clouds roll away to be replaced by blue sky. Turning left on to a wide, smooth bridleway, we ride through the fresh layer of bright white hail with the satisfying feeling of being the first to cut a track. The bridleway doesn’t last for long before we join the High Peak Trail, a former railway line now set up for leisure use.

‘Now this bike is starting to make sense,’ says Chris, who is enjoying the GT, flying along the trail where the surface is about as close to the gravel roads of the USA as we are likely to find. But as fast and easy as old railway tracks are, that is not why we came to the Peaks. Thankfully, a brief spell on busy main roads is over quickly, then a road sign – normally ominous on a road ride – is, today, a good omen: ‘Road unsuitable for motor vehicles.’ I can’t help but smile. Nothing bounds these bikes; they offer the

THE ROAD TURNS INTO A MESS OF ROCKS AND WE STOP. ‘THIS WAY?’ WE ASK, POINTING AHEAD, AS IF THERE WERE ANY ALTERNATIVE



NOTHING BOUNDS THESE BIKES. THEY OFFER THE FREEDOM OF MOUNTAIN BIKING BUT WITH SPEED TO COVER DISTANCE

prove hard to resist. Wide, fast dirt track or narrow, loamy singletrack? It's a tough decision, but it's a nice one to be able to make.

Waiting at the bottom, Chris is nowhere to be seen. 'I don't fancy climbing back up, I'm sure he's OK,' says Andy. As time goes on, we mull over the bikes and the ride, then we start to worry. Fortunately, Chris turns up unscathed.

'What happened?'

'Front wheel pinch puncture.'

'Good effort. You must've been going some.'

Puncture sorted, we ride through the Chatsworth House estate, complete with deer in the fields and stubborn sheep who seem quite happy to stand in the road holding up traffic. Our route turns left into the village of Edensor and the sign displaying tea rooms isn't one to be missed. Triple chocolate sparkle cake is the order of the day – apparently, the sparkles really make a difference.

Lined up next to one another, the chunky lines make for great looking bikes. Each has a very different background. Norco, a Canadian brand, has its roots firmly in mountain bikes and that is clear to see, most notably in the front and rear bolt-thru axles and a stout carbon frame. BMC is traditionally seen as a road brand in Britain so it's no surprise that the GF02 has narrow seatstays, quick-release axles and a horizontal top tube. GT holds the middle ground, initially a BMX manufacturer before becoming a well-regarded maker of mountain bikes, which stubbornly refuses to stop using its iconic Triple Triangle design, where the seatstays join the top tube beyond the seat tube for a smaller, stiffer rear end.

Cakes and coffee consumed, we get back on to the route to tackle a challenging muddy climb. Considering the tyres we're all using, especially the full slicks on the GT, it's amazing what we are able to ascend. The tyres grip tenaciously so long as a sensible line is chosen and, despite being the only bike with a larger 52/36 chainset, the GT's bigger gears prove to be unproblematic.

'I have to admit,' says Chris, 'I was a bit intimidated by the gear spread when I saw it, but it isn't a noticeable problem. Steep off-road climbs will always be tough on a narrow-tyred bike, as you need to push a bigger gear to keep traction and reduce pedalling torque.' Spot the physicist in the group.

Leaving the beautiful Chatsworth estate, the next descent Andy points us down is the roughest and trickiest of the day. It's

freedom that mountain biking gives but with the speed and ease of ride that allows them to cover big distances. The road ends, the mud begins and we slither down, a drift here and there adding to the fun. Gradually the track gets a bit rougher, small stones turn to rocks, 4x4 tracks turn into ruts but our speeds only increase. Even on the slick-treaded GT, this is a fun descent, but on the BMC and Norco it's a riot, even with no rear brake. It's a testament to how good they are that a single brake can cope so well.

Just over halfway through the route we pass through Darley Dale. A 20 per cent sign dares us on to a narrow road that pushes up painfully, just as you would expect a 20 per cent climb to feel. It's the only time so far today that I give a thought to riding a flyweight, race-inspired road bike. We turn off the B-road on to smaller lanes, then off-road completely on to a green lane near Beeley Lane. Singletrack sections can be seen shooting off into the woods, and these



The Norco's front brake put on a sterling solo performance when the rear failed



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NORCO SEARCH CARBON

A bike that's hungry for adventure and well worth its price tag

Summary

With a chunky carbon frame, brash colour scheme and a component choice that's hard to knock, the Norco feels fun from the moment you swing a leg over and is equally at home on back roads as it is off the beaten track. While it may seem unfair comparing it with two cheaper bikes, its spec and value hold up favourably against higher-priced models. We chose a 53cm tester for our 1.68m rider.

Best points

The frame feels taut and eager to be pushed further and into rougher terrain. Matched with tubeless compatible wheels and Ultegra 11-speed, it's a great all-round package.

Worst points

The head tube is tall, so riders looking for a racier setup might find they are too high. A slipping seatpost clamp was the only real negative but that could be fixed simply. The saddle will take time to break in and soften.

Price: £2,300

Frame: Norco Mid-Mod Carbon, Norco Mid-Mod Carbon Disc fork

Wheels: Easton EA70 XCT Disc

Tyres: Clement X'Plor USH, 35c

Groupset: Shimano Ultegra 6800, 50/34 chainset, 11-32 cassette

Brakes: Shimano RS685 levers with Shimano RS785 callipers with 160mm rotors

Handlebar: Ritchey WCS Evo Curve

Stem: Norco Lite

Seatpost: Norco Lite Composite 27.2mm

Saddle: Fizik Tundra M5

Weight: 8.6kg

Contact: evanscycles.com





shown as a road on Google Maps, but the rocks, big ruts and vast amount of mud suggest otherwise, at least in February. A mountain bike would be faster but ours are no less fun. Ear-to-ear smiles spread across our faces as we perform two-wheel drifts around the muddy corners, helplessly guide the bikes in and out of ruts and do our best to avoid the big stones. 'I'm sure this is exactly what these bikes were designed for,' declares Andy. A bit of sarcasm maybe, but pushing the boundaries only helps endear the bikes to us further.

A short carry down an embankment leads us on to another old railway: the Monsal Trail, a famous stretch that now has four long tunnels open to the public. It's a popular area, so despite riding mid-week in the middle of winter it's quite busy. The tunnels are a marvel and quite surreal; dimly lit but with a good surface beneath, they ease you right through the mountains.

We follow the old line until the Pennine Bridleway splits off. A short but sharp climb defeats us all but may be rideable in drier conditions. At the top, Andy is keen to inform us that we've reached the end of the day's hills. Without saying it, we're all pleased and grateful that, with tired legs and the light slowly starting to disappear, it isn't far back to Buxton.

We skirt around the enormous Tunstead quarry before a final sting in the tail... 'I thought you said we'd finished all the climbing!' Chris complains to Andy. Thankfully, this time it really is the last of the day and we're soon rolling back into Buxton and back to our car.

In a cycling world obsessed with aerodynamics, average speed and watts, it was a pleasure to head to the hills, escape the cars but still manage good distance and, with that, see more of the area. The bikes were a revelation and coped superbly with Andy's challenging route. The feeling of being able to go anywhere and ride anything was fantastic and not one that will ever get boring. What's more, we only had one puncture all day.

In the USA they call them gravel bikes, but over here that does them a great disservice as they are capable of far more. Perhaps 'adventure bikes' is a more fitting name. Do they have a place in this country? You bet.



GT GRADE ALLOY X

Is this subdued-looking bike a diamond in the rough?

Summary

The GT Grade brings the iconic Triple Triangle straight into 2015, the year of the gravel bike. It's a capable ride that gives you confidence to try trails you might think beyond its limits. The 55cm frame fitted our long-legged, short-bodied 174cm tester perfectly.

Best points

The Shimano hydraulic discs are superb, giving plenty of stopping power and great lever modulation.

Worst points

While good for genuine gravel duties, if lacking in cushioning volume, the tyres really let go on anything approaching mud. Something larger and with more tread would render the package more versatile for the UK.

Price: £1,500

Frame: Grade hydroformed alloy, full carbon fork

Wheels: Jalso CR435 rims with Formula disc hubs

Tyres: Continental Ultra Sport 2, 28c

Groupset: Shimano 105

Brakes: Shimano R685

Handlebar: GT DropTune Ultra Lite

Seatpost: Two bolt aluminium

Saddle: GT Bio-Morphic road

Weight: 9.82kg

Contact: gtbicycles.com



The GT sails over gravel, but show it some mud and the tyres won't thank you

Rating

FRAME

COMPONENTS

THE WHEELS

THE RIDE

OVERALL

74

10



EAR-TO-EAR
SMILES SPREAD
ACROSS OUR
FACES AS WE
PERFORM TWO-
WHEEL DRIFTS
AROUND THE
MUDDY CORNERS

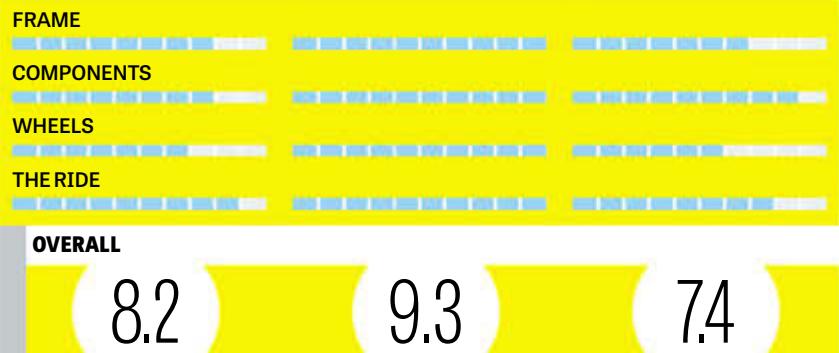
HOW THEY STACK UP...



BMC GRANFONDO GF02
DISC £1,700

NORCO SEARCH CARBON
£2,300

GT GRADE ALLOY X
£1,500



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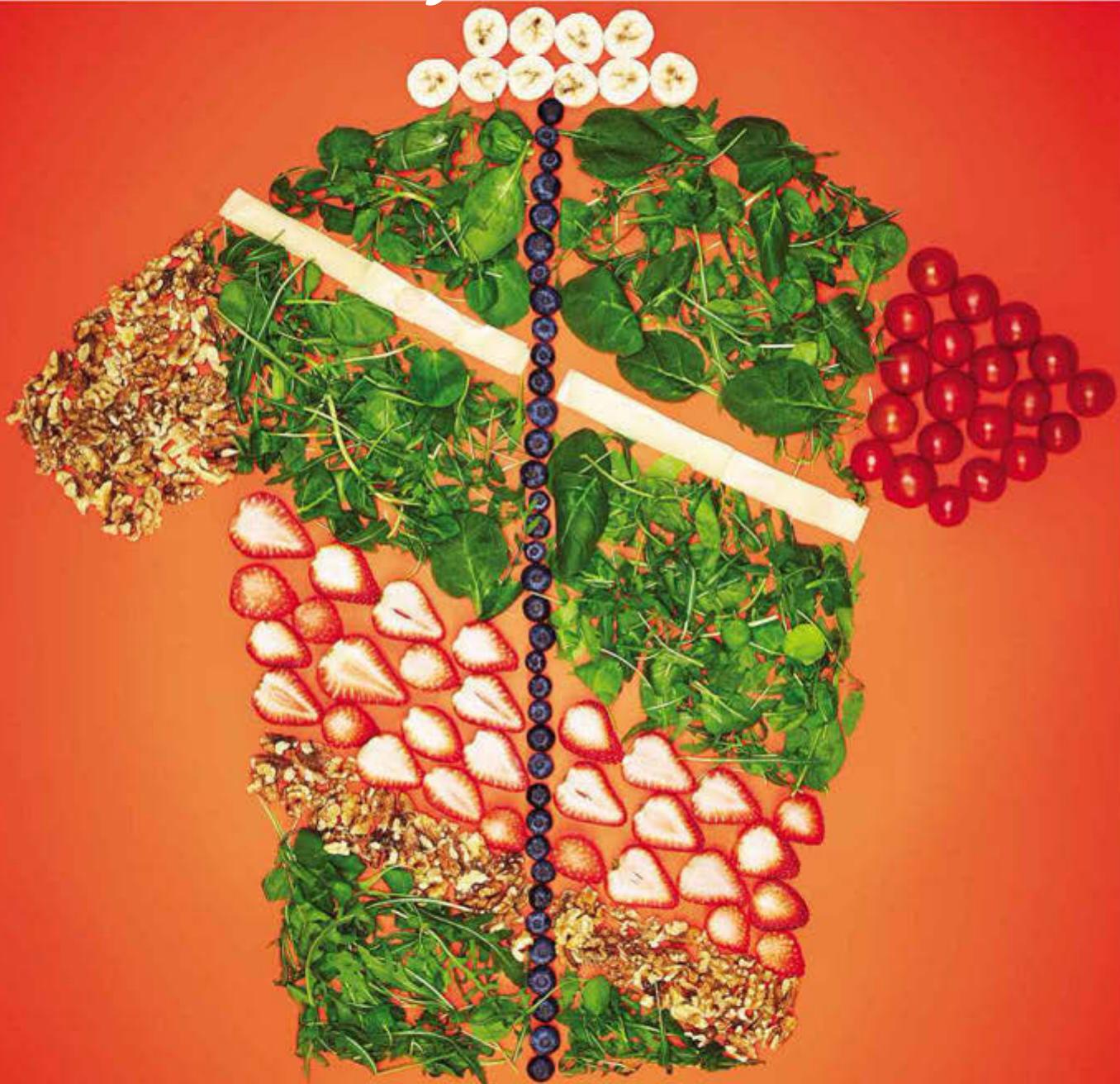
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WORDS: ROB KEMP



FROM LAB TO PLATE

GONE ARE THE DAYS OF STEAK FOR BREAKFAST AND BEER IN THE BIDON – TODAY'S CYCLIST LOOKS TO SCIENCE FOR THE PERFECT PERFORMANCE FUEL TEMPLATE

B

ack in the post-Second World War 'Golden Age' of cycling, the feats of pro riders such as Ferdi Kübler, Hugo Koblet and controversial five-times Tour de France winner Jacques Anquetil seemed pretty fantastic. But they're all the more impressive to us today when we consider how such legends of the long ride were fuelling themselves.

No energy gels or concentrated caffeine shots for those chaps. Anquetil, for example, who dominated the Tour from 1960 to 1964, maintained that his ideal preparation for a successful race involved 'a good woman and a bottle of champagne'. One tale even suggests that the 'hair of the dog' filled his bidon and spurred a memorable comeback during the 1964 Tour. Stories abound of how many of the great riders of the time would breakfast on rump cuts of red meat and refuel on even redder wine.

But as the value of the Tour rose and the early attempts at combating doping took hold, so the science of performance nutrition began to make its mark. In the early 1960s, top cyclists such as Fausto Coppi began to complement new training techniques with a different approach to diet, moving away from the heavy breakfast steak of old towards

IDEAL RACE PREPARATION FOR ANQUETIL WAS A GOOD WOMAN AND A BOTTLE OF CHAMPAGNE

the principle of eating little but often. But perhaps the greatest shift in nutritional know-how at that time – and one which would dominate the approach of endurance athletes for decades – came from the studies of Swedish physiologist Gunvar Ahlborg.

TAKING A LOAD OFF

Ahlborg identified the effect on the body of depleted glycogen, the form in which the muscles and liver store ready-to-use energy. From this, he pioneered the carb-loading protocols that cyclists soon adopted. Carbohydrates are readily converted into glycogen by the body, and long-distance runners had been filling up on stodgy starches since the 1920s, but the science behind the benefits of a high-carb diet before a long race was new to cyclists.

'Carb-loading is still an important consideration for cyclists today,' explains Emma Barraclough, Senior Sports Nutritionist at Science in Sport (scienceinsport.com). 'Carbs are your body's most efficient source of fuel for high-intensity exercise and you should ensure you have a plentiful supply before you begin rides of a couple of hours or more.'

Not all carbs are equal, though, and research has led to the development of the glycaemic index (GI), which measures how different carbohydrates are used by the body (see 'FYI... GI' on page 47).

'In general, cyclists should focus on eating high-quality, low-GI carbs such as sweet potatoes, brown rice and wholegrain pasta, switching to high-GI carbs ahead of a race or sportive,' says Barraclough.

Today's nutritional advisors are also wary that

A MOVING FEAST

CYCLING'S POTTY POTTED HISTORY OF EELS, THRILLS AND RICE CAKES

1903-1914

During the earliest editions of the Tour De France, riders rely on the local population (ie farmers) for support. Fueling includes boiled eggs, loaves of bread, well water and cigarettes.



1930

Sodium bicarbonate is first used as a sports supplement among cyclists. Chocolate drinks from Menier are handed out to Tour riders.

1935

Drinks firm Ricqles provides complimentary alcohol for Tour riders ahead of each stage.



1970s

Luis Ocaña's 'rider' before the Subida a Arrete hill climb is two large servings of baby eels and a steak. On stage 15 of the 1975 Tour de France, Australian domestique Don Allan demands a 25-tooth gear, a beer, and a chicken sandwich. Once satisfied, Allan finished the stage.



1979

Riders in the 1979 Peace Race are given rice cakes before each stage – two slices of rice cake with an apple or sultana filling.



1990s

Lance Armstrong's 'legitimate' diet includes a breakfast of tagliatelle with an egg on top, lunchtime sandwiches containing honey and chopped bananas, or smoked turkey with cream cheese, plus energy bars and fruit.

2000s

Superfoods are adopted for marginal gains, from porridge to Montmorency cherry extract and beet juice for high nitrate intake. Bradley Wiggins switches to a gluten-free diet on the advice of Nigel Mitchell, featuring goji berries, flax and sunflower seeds, bananas and CNP flapjack bars.



the capacity for the body to store muscle and liver glycogen is limited to around 2,000 calories, and while training will help your body adapt to processing and using calories more efficiently, it's possible to get through that amount of fuel in around 120 minutes of constant cycling.

'That's where having a precise and easily digested supply of snacks that you can eat during a long ride comes into play,' says Barraclough. Recent research from the University of Birmingham shows that 60g of carbohydrate per hour is the optimum intake when you're in the saddle to keep your stores topped up.

WEIGHT WATCHING

Raising calorie intake to ensure you've the energy levels to compete can lead to concerns among some cyclists as to how to manage their weight.

In the past, the default setting for the weight conscious was, more often than not, dieting – drastically reducing calorie intake, restricting the volume and variety of foods in your three square meals a day, fasting or following fads.

Once again, science has shown these methods to be both dated and dangerous. Instead, cyclists looking to lose weight (or simply manage it) need to focus not on restricting what they eat but restructuring the way they do it. As Nigel Mitchell,

British Cycling and CNP Nutritionist, explains, your daily calorie intake should be balanced against your expenditure and consist of several small, high quality meals through the day.

'If you're cycling as part of your commute, say up to an hour a day, you can use this to help with weight management. Try cycling on just a cup of coffee if it's under an hour,' suggests Mitchell. Once you get to work, he recommends a breakfast of quality carbs and protein in the form of porridge with milk and fruit.

Pioneers of the GI approach also point out that the little-and-often method stops you craving snacks and sugary sweet foods that provide an instant spike in blood-sugar followed by an energy draining drop.

'You should look to have a mid-morning snack to stabilize your blood sugar and energy levels – for example, a banana – and a lunch-time meal that features rice, potatoes or pasta for carbs, with lean meat or a similar protein source,' suggests Mitchell.

The key is to strike a balance between energy for exercise and watching the waistline. 'Good quality protein along with watching your portion sizes and looking to low-GI carbs are the basic principles to managing your energy intake,' says Mitchell. Regular cycling will tick the energy expenditure box, but Mitchell reiterates that portion control is essential. 'If you're having pasta or rice with

Photography: Juan Trujillo Andrade

PRO DIET
RUSS DOWNING,
CULT ENERGY PRO
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cultenergyprocycling.com



During the race season, I'll start the day with muesli or porridge and juice to wash down the vitamins I'll take – especially during the toughest stages. I'll maybe have some toast and as much coffee as I can get inside me before I leave.

If I'm training and based at home, it's easier to head out and train for four or five hours. I'll take a drink but I don't really have lunch – I wait to eat until I get home. I have a sweet tooth so I'll have peanut butter and jam on toast, then a bigger evening meal of bolognese or fish with steamed vegetables.

I find protein shakes can be a chore to take, but I'm really enjoying the Vital Water we have now – it's ready mixed and chilled, which you need after a long, dehydrating session.

It's different when you're racing or overseas with the team. You follow the routine but the food can get a bit mundane. I was in Majorca for a training camp recently and by around day seven I went to the buffet and thought, 'What, again?'

In the off season, I'm more relaxed. I'll still keep to a pretty sensible diet and portion sizes, but I take the opportunity to have a takeaway and a beer or a glass of wine. I've found that if you deny yourself something you want, you begin to crave it. I don't go mad, I'm not a beer monster or anything, but I'm old school and it works for me.

**TRY RIDING ON
JUST A CUP OF
COFFEE IF YOUR
RIDE IS UNDER
AN HOUR**



FIVE MYTHS OF CYCLING NUTRITION

1 ONE RATIO FITS ALL

The amount of your energy you get from carbs in your diet needs to tie in with your activity level. 'If you're doing over 10 hours of training per week you need to get around 65% of your energy from carbohydrates, as that is the major fuel source for moderate to high intensity exercise,' says sports nutritionist Emma Barraclough. 'Balance this with 15% of your energy from protein and 20% from fat. If you're only riding for a couple of hours a week and are looking to drop weight, a ratio closer to 40% carbs, 30% protein and 30% fat would be preferred.'

2 DRINK ACCORDING TO THIRST

Is it better to drink according to thirst or to a schedule? 'To avoid dehydration, drinking to a routine helps to take out the guesswork,' says Barraclough. 'Thirst is susceptible to the weather – hot conditions tend to encourage you to drink more as the warm air dries your mouth, while in the colder months you tend to be less inclined to drink adequately.' Whichever best suits you, take on a drink containing electrolytes (such as SiS GO Electrolyte) – the sodium helps the body retain fluid.

3 WHITE BREAD IS THE WORST

'Before and immediately after exercise, high-GI carbohydrate, such as white bread, pasta or rice is very useful,' says Barraclough. 'The insulin response it creates helps to drive carbohydrate into the muscles to restore glycogen, the body's stored form of energy.' During exercise, high-GI carbs are also preferred as you need the energy quickly. 'Energy drinks and gels are formulated with high-GI carbs for this reason with some (such as SiS GO Isotonic Energy) being formulated from a specific type of maltodextrin to ensure that they empty from the stomach quickly and provide a fast source of energy.' In your everyday diet, low-GI carbs are preferred. 'This could be wholegrain bread, brown rice, wholegrain pasta or sweet potatoes, which have more fibre than their white counterparts and therefore release their energy more gradually throughout the day.' This helps to avoid sugar spikes while you are largely sedentary and helps you to manage your hunger more effectively.



4 SKIP BREAKFAST TO BURN FAT

Adding some fasted training sessions into your weekly routine can help to drive fat loss and increase the signalling for energy metabolism in your muscles. 'But you need to be careful, as too long or too intense a session can depress your immune system and leave you susceptible to coughs and colds,' warns Barraclough. 'You will also struggle to maintain high intensity for long as carbohydrate is your primary fuel for that level of work.' One or two sessions a week of less than an hour can be beneficial for fat loss, but for longer, higher intensity riding, you need to take on adequate fuel.

5 RIDE SLOWLY TO LOSE BODY FAT

The 'fat burning' zone on heart rate graphs can be misleading. 'It's true that riding at a slower pace you will mainly use body fat as the fuel supply, but you won't burn as many calories as riding at a higher intensity,' says Barraclough. If you are trying to improve your body composition, high intensity work with some intervals is the best way to lift your metabolism. 'This will increase the calorie spend within the session itself, and then keep burning more calories at rest due to your elevated metabolism.'

a meal that's not part of a pre-race load, aim for no more than about 100g uncooked weight.'

Mitchell also advocates cooking large meals at the weekend and taking portions into work for lunch. 'Home cooking, knowing the ingredients of what you're eating and controlling the portion sizes will help you stay on track – and help ensure you don't skip a meal at work or resort to buying heavily processed foods or takeaway meals.'

PROTEIN PROVISION

There's more to eating well as a cyclist than carbs though. In recent years, greater emphasis has been placed on the role of quality protein and fat in the diet of the modern athlete. The International Society of Sports Nutrition has highlighted research which says individuals who exercise regularly need 1.4-2.0g of protein per kilogram of bodyweight per day. This amount is dependent on the type and intensity of the exercise, as well as the quality of the protein. Sports dieticians will recommend that whole foods are the best source of protein, but increasingly, supplements such as whey and casein protein mixes are used by cyclists as a convenient way of ingesting high quality dietary protein.

Much of the new thinking around protein lies in the properties of branched chain amino acids (BCAAs), which speed up the processing of protein into muscle-repairing nourishment. Endurance cyclists are among those who the experts insist need more dietary protein than their sedentary counterparts. 'Endurance training forces adaptations to occur within the body,' explains Barraclough. 'Proteins not only increase the size and strength of muscle fibres but can play a key role in energy production too.'

PROTEIN INCREASES MUSCLE SIZE AND STRENGTH, AND PLAYS A KEY ROLE IN ENERGY PRODUCTION

'Rapidly digesting protein is essential for recovering well after exercise,' Barraclough adds. Ideal for cyclists who need to quickly return to race-ready condition for rides spread over several days.

Research reported in the *Journal of Applied Physiology* and the *American Journal of Clinical Nutrition* shows that taking a protein/amino acid and carb mix helps refill glycogen levels and support lean muscle mass ahead of the next day's ride much more effectively than taking carbs alone. Studies also show that the amino acid leucine in particular provokes the muscle to make more proteins.

Recent research also shows that dietary protein increases the number and function of mitochondria within the cells, which in turn enable a cyclist to produce more energy from fat.

GETTING FRIENDLY WITH FATS

Cyclists are especially efficient at converting the fat stored in their muscles to supply additional energy when glycogen stores drawn from carbs run low. By adapting their diet and training programmes, riders can encourage the conversion of fat to energy. 'Fat is energy dense,' explains Barraclough. Just one gram of fat carries nine calories of energy – carbs and protein provide only four per gram. 'But it's also a slow food to digest and convert into a fuel source.'

Even breaking down body fat takes a much greater time than fast-digesting carbs – and it's a process which demands more oxygen, having a knock-on

effect on performance. Research from the mid 1980s published in the *Journal of Applied Physiology* first identified the use of fat stores in the body – from within muscles, as well as fatty tissue – to fuel exercise among trained athletes. But it's more recent studies published in the *International Journal of Sports Medicine* that have identified the best method of using fat as an energy source, leading to the 'rule' that in order to best oxidise fat, endurance athletes need to exercise at low to moderate intensities – below 65% of the body's aerobic capacity.

This doesn't mean that endurance cyclists should leave fat out of their diet though. 'Elite cyclists are encouraged to include "good" fats within their diet – ones that come from fish or plants including nuts, avocado and olive oil,' says Barreclough. 'Fat also helps athletes absorb vitamins efficiently.'

FINDING VALUE IN VITAMINS

The intake of additional vitamins and minerals beyond those available through a regular diet has been a controversial subject among nutritionists ever since Polish-born biochemist Casimir Funk identified 'vital amines' in 1912. A multimillion pound industry has grown on the back of Funk's findings and today cyclists are deluged with advice to top-up their diet (legally) with high levels of vitamins that will boost the flow of blood and oxygen to the muscles, aid the conversion of energy and strengthen the body's immunity to disease. →

BREWING POWER

THE HUMBLE COFFEE BEAN IS A WELL-ESTABLISHED SOURCE OF THE METABOLIC STIMULANT CAFFEINE. STUDIES FROM THE AUSTRALIAN INSTITUTE FOR SPORT REVEAL THAT CAFFEINE CAN IMPROVE MUSCLE POWER AND ENDURANCE EFFORTS – WITH AS LITTLE AS ONE 120ML CUP CAPABLE OF PROVIDING A 5% IMPROVEMENT IN PERFORMANCE. HERE'S HOW TO BLEND YOUR BEANS WITH YOUR RIDE...



PRIMO CAPPUCINO

WHAT? One third espresso, one third steamed milk and one third foam; named after the white-hooded brown robes of Capuchin monks

CAFFEINE: 185mg

BEST FOR: An hour before your start – it'll warm you up as well as perk you up

MAX PER DAY: 2.2

(based on the *Journal of Food Science*'s finding that 300-400mg of caffeine can be consumed daily)

PRO TIP: Get into the habit of breakfasting monk style



PRIMO ESPRESSO

WHAT? Single shot (30ml) of coffee in a demitasse, brewed by forcing hot water through ground coffee at high pressure, making a more concentrated drink than other methods

CAFFEINE: 90-100mg

BEST FOR: an instant boost before a climb or a speedy section

MAX PER DAY: 4.2

PRO TIP: In Italy coffee is espresso; in cycling it translates to expresso



DOUBLE ESPRESSO

WHAT? Double whammy (60ml) of this short, sharp liquid defibrillator

CAFFEINE: 180-200mg

BEST FOR: Getting off to a flying start when you feel one shot just isn't enough

MAX PER DAY: 2.1

PRO TIP: 'This is the "magic dose" of caffeine for the best ergogenic outcomes,' says performance nutritionist Dr Mayur Ranchordas. 'About 3mg of caffeine per kilo of bodyweight is ideal.'



MEDIO AMERICANO

WHAT? During the Second World War, US soldiers couldn't cope with the strong Italian coffee and asked for extra water – the 'Americano' was born

CAFFEINE: 277mg

BEST FOR: Midway-through-a-long-ride mix of caffeine stimulation and hydration

MAX PER DAY: 1.4

PRO TIP: Add a splash of skimmed milk to take some of the heat out of this pit-stop perk



MEDIO CAFFÈ MOCHA

WHAT? Caffè latte (espresso topped up with steamed milk) flavoured with chocolate

CAFFEINE: 287mg

BEST FOR: This is definitely a recovery coffee – protein from the milk fat and carbs from the chocolate

MAX PER DAY: 1.3

PRO TIP: 'Go full-on with the fat or get a lattè with added syrup for additional muscle-repairing protein and carbohydrates,' suggests Ranchordas.



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'There has been a trend towards taking more antioxidant vitamins – such as A, C and E – to lessen the stressful impact exercise has upon the body,' explains Barraclough. 'But this may blunt the athlete's development.' The effects exercise has upon the body – the inflammation and the 'tear and repair' process of muscle growth – are a vital part of training adaptation. 'Studies suggest that taking additional antioxidant vitamins could compromise some of the gains you're seeking to achieve,' adds Barraclough.

'Ideally, you should be able to get enough vitamins and minerals from a well-balanced diet – one that features a variety of fruit and vegetables, and doesn't pack too many processed foods,' says Barraclough. Sports nutritionists err on the side of caution more these days, often advising blood tests to check for deficiencies before recommending supplements.

Finally, one shift in physiological thinking since the 'Golden Age' is the approach to ales, wines and spirits. While the pros may indulge in a celebratory glass of bubbly after a win, the idea of fuelling from the flagon or firkin as Anquetil did is more than just outdated. 'Alcohol is a diuretic,' warns Barraclough. In other words, it increases the frequency and volume of toilet breaks, making dehydration more drastic. 'Metabolising alcohol means the liver is unable to do the job of producing glycogen, sapping your energy levels too.' A sobering thought.

Over the next five pages, you'll find a selection of recipes from *The Feed Zone Cookbook* devised by chef Biju Thomas and nutritionist Dr Allen Lim, that take on board many of the latest findings of sports nutrition science to provide perfect fuel for pre- and post-ride meals, and snacks to keep your energy topped up on the bike. *Bon appetit and bonne route!*



SUPPLEMENTARY BENEFITS

BOOST IMMUNITY AND POWER UP PERFORMANCE WITH THESE HEALTHY ADDITIONS TO YOUR DIET...



CAFFEINE

'Caffeine lowers your perception of effort so is useful whether you're racing an hour's criterium or tackling a 100-mile sportive,' says sports nutritionist Emma Barraclough. If you're riding for 60 minutes or less, take a dose an hour beforehand to have the best effect. If the event is longer, it's worth saving your caffeine dose towards the end of your ride as your fatigue level builds.'

TIP: A typical dose in an energy gel (such as SiS GO+Caffeine Energy Gel or drink) is 75mg – slightly less than a single espresso.

NITRATES

The key element in green leafy vegetables or beetroot, nitrates help to lower the oxygen cost of exercise and improve your endurance performance. 'To get the best effect, you can load with nitrates by taking the same dose for each of the two days before your event,' says Barraclough.

TIP: You need around 500mg of nitrate before your event, which is the equivalent to half a litre of beetroot juice. (Or two SiS GO+Nitrates gels.)

BETA ALANINE

'Beta alanine has become popular in the pro peloton in recent years,' says Barraclough. 'It has been shown to increase the concentration of carnosine in skeletal muscle, decreasing fatigue and therefore increasing the total muscular work done.'

TIP: Typical dosing for a performance benefit would be around 4g per day, taken over two doses before and after training. 'Beta alanine can create a tingling sensation in the skin. Keep its use for the build-up to races or intense training periods when it will have the most benefits.'

VITAMIN D

Cyclists living in the northern hemisphere can become vitamin D deficient during the winter due to a lack of sun exposure. Vitamin D has long been associated with bone health as it is required for calcium absorption. This is an important consideration if you do no other impact sports, as bone mineral density tends to be lower.

TIP: Be sure to take vitamin D during the flu season especially. In recent years, vitamin D has been associated with immune function – key in recovery and avoiding too many coughs and colds.

SODIUM BICARBONATE

'This supplement is popular among short-course time-trialists or track riders as it acts as a buffer for lactic acid,' explains Barraclough.

TIP: 'The dosing needs to be tightly controlled as excessive levels can be toxic and there is a real risk of causing gastric upset,' Barraclough warns.

COOKING FOR VICTORY

NOW YOU'VE LEARNED THE SCIENCE BEHIND CYCLING NUTRITION, PUT IT INTO PRACTICE WITH THESE GREAT RECIPES FROM *THE FEED ZONE COOKBOOK**

FOOD PHOTOGRAPHER: LAUREN MCLEAN CHEF & FOOD STYLIST: KAROL GLADKI

PRE-RACE

CRISPY RICE OMELETTE

SERVINGS 6
TIME 20 minutes

PER SERVING

Energy	133 cal
Fat	8g
Sodium	268mg
Carbs	7g
Fibre	0g
Protein	8g
Water	46%

FEED ZONE PORTABLES

1 Liberally coat a medium non-stick pan with olive oil and place over a high heat.

2 Once the pan is hot, add the cooked rice, spread evenly, and cook until crisp (about 3 minutes). Lightly beat the eggs in a medium bowl and pour over the rice. Mix gently, then let the eggs begin to set.

3 Loosen the edges of the omelette with a spatula as you tilt the pan, allowing the uncooked egg to fill in around the edges. Cover and cook until the eggs in the centre of the pan is set, or finish in the oven at 180°C (350°F) for about 5 minutes. Top with grated parmesan and a hearty shake of coarse salt and pepper.

4 Cut into six triangles. Allow to cool to the touch before eating. Store extras in the refrigerator.

*Recipes republished with permission of VeloPress from *FeedZone Portables* by Biju Thomas and Dr Allen Lim. Try more recipes at feedzonecookbook.com



SERVINGS 6
TIME 20 minutes

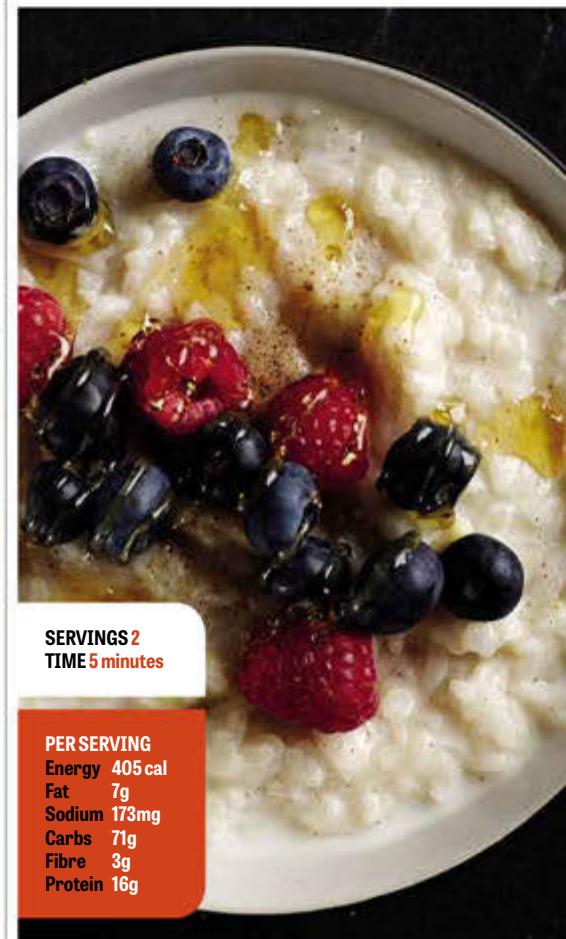
PER SERVING
Energy 122 cal
Fat 3g
Sodium 60mg
Carbs 17g
Fibre 1g
Protein 4g
Water 43%

BANANA WAFFLES

- 1 cup (60g) coarse gluten-free bread crumbs
 - ½ cup (60g) white rice flour
 - ¼ cup (40g) ground almonds
 - pinch of ground nutmeg
 - 1 tablespoon brown sugar
 - 2 eggs, lightly beaten
 - ¼ cup (60ml) almond milk
 - 1 large ripe banana
- 1 Heat the waffle iron.
 - 2 Place the dry ingredients in a food processor and pulse quickly to combine.
 - 3 In a small bowl or measuring cup, combine the eggs and almond milk and stir briskly. Pour this into the food processor; add the banana, and pulse. Batter should be smooth and somewhat dense.
 - 4 Pour enough batter into each waffle form to nearly fill all the squares (it will expand when pressed). Cook until the outside of the waffle feels crisp. Repeat, using the remaining batter.
 - 5 Makes four large waffles. Cut each into quarters and top with your favourite spread to make eight mini waffle sandwiches. Allow to cool before eating.

SWEET RICE PORRIDGE

- ½ cups (360ml) milk
 - 1 egg yolk
 - 1 cup (190g) cooked rice
 - 1 ripe banana, sliced
 - 1 teaspoon vanilla extract
 - 2 tablespoons brown sugar
 - dash each of salt and ground cinnamon
 - fresh berries (optional)
- 1 Whisk together milk and egg yolk in a medium pan and heat gently.
 - 2 Add the cooked rice, banana, vanilla, brown sugar, salt and cinnamon. Cook and stir for 5-10 minutes or until the mixture comes to a gentle boil.
 - 3 Transfer to a bowl or plate and top with fresh berries if desired.



SERVINGS 2
TIME 5 minutes

PER SERVING
Energy 405 cal
Fat 7g
Sodium 173mg
Carbs 71g
Fibre 3g
Protein 16g

FYI... GI

GET TO GRIPS WITH THE GLYCAEMIC INDEX TO LEARN GOOD CARBS FROM BAD

The glycaemic index (GI) grades the carbohydrate in foods on a scale according to the time it takes for a 50g serving to be converted to glucose in the blood. Foods with a high GI value (70 or more) such as white bread result in a rapid rise in blood glucose. 'Glucose itself has a score of 100 – and some dried fruits are even higher,' explains Mayur Ranchordas, Senior Lecturer in Sport and Exercise Nutrition and Physiology at Sheffield Hallam University. This makes them useful for an instant energy hit ahead of a time-trial, during a long sportive or for a rapid replenishment of muscle and liver glycogen stores after riding. When not cycling, stick mainly to foods with a low GI (55 or less) to ensure a steady feed of glucose

without sugar spikes and possible resultant fat gain.

Recently, the GL (glycaemic load) of a food has become more important to cyclists and athletes as this takes into account the portion sizes that we normally eat too. While some foods share the same GI – eg carrots and chocolate (both GI 48) – you need to munch through two large carrots to get the same amount of carbohydrate as you get from two tiny squares of chocolate.

Glycaemic load scores foods from zero to 20. When portion size is taken into account like this, carrots score 3.9 while chocolate scores 14. High GL foods then provide an ideal hit when training, while foods with a low GL will help you manage your weight when you're not training.



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HONEY BANANA BAKED RICE BALLS

- 2 cups (380g) uncooked sticky rice
- 3 cups (480ml) water
- 1 ripe medium banana
- 1 tablespoon walnuts
- 1 tablespoon honey

- 1 Combine the water and rice in a rice cooker with a dash of salt and let cook. (If you don't have a rice cooker, cook the rice in a pan in double the volume of water.)
- 2 While the rice is cooking, place the remaining ingredients in a food processor and pulse a few times to get a uniform 'minced'
- 3 Heat oven to 180°C (350°F). Lightly coat a baking sheet with non-stick cooking spray or line with parchment paper. When the rice has finished cooking, mix it with the remaining ingredients and stir thoroughly.
- 4 Shape the rice mixture into 12-15 evenly sized balls and place on the baking sheet.
- 5 Bake for 10-15 min.
- 6 Allow to cool before wrapping.

finish. (Alternatively, mince the ingredients and stir together in a medium bowl.)

**SERVINGS 12-15
TIME 20 minutes
+ time to cook rice**

PER SERVING
Energy 135cal
Fat 1g
Sodium 3mg
Carbs 30g
Fibre 1g
Protein 2g
Water 57%

**SERVINGS 10
TIME 10 minutes
prep, chill 1 hour**

PER SERVING
(1 cake)
Energy 323 cal
Fat 14g
Sodium 700mg
Carbs 44g
Fibre 3g
Protein 6g

CHOCOLATE PEANUT COCONUT RICE CAKES

- 2 cups (380g) uncooked medium-grain 'sticky' rice
- 1½ (360ml) cups water
- 1 cup (150g) raw or roasted peanuts
- 1 cup (120g) unsweetened shredded coconut
- 2 tablespoons brown sugar
- 1 tablespoon salt
- honey or molasses (if needed)
- ½ cup (110g) chocolate chips

- 1 Combine the rice and water in a rice cooker and cook (or cook the rice in double its volume of water in a pan).
- 2 Once the rice is cooked, put all
- 3 Add the chocolate chips and pulse until the chocolate melts and incorporates into the mixture.
- 4 Transfer mixture to an 8 or 9in square baking pan and press to about 1in thick. Top with more peanuts and chocolate chips if desired.
- 5 Allow to cool before cutting and wrapping individual cakes. Makes about 10 rice cakes.

ingredients except chocolate chips in a food processor and pulse together into a thick, crumbly paste. Add a little honey or molasses if mixture is too dry.

**SERVINGS 12-15
TIME 20 minutes
+ time to cook rice**

**SERVINGS 10
TIME 10 minutes
prep, chill 1 hour**

PER SERVING
(1 cake)
Energy 323 cal
Fat 14g
Sodium 700mg
Carbs 44g
Fibre 3g
Protein 6g

RICE AND BANANA MUFFINS

- 2 cups (190g) cooked white rice
 - 2 eggs
 - 1 ripe banana
 - 2 tablespoons brown sugar
 - 1 tablespoon rice or potato flour
 - ¼–½ cup milk (60-120ml) (see note)
 - pinch of salt
- OPTIONAL ADDITIONS
- 1 teaspoon vanilla or
 - almond extract
 - 1 teaspoon each of ground cinnamon or nutmeg

combine ingredients and slowly add milk to make a thick batter.

3 Fill muffin tin halfway with batter. Bake for 15–20 minutes or until centre is firm (test with a toothpick or cocktail stick). Muffins will not rise much.

4 Let cool completely, then use a knife to gently loosen the muffins from the pan. Store in the fridge in a sealed container, wrapping before riding.

NOTE You will need to adjust the milk depending on how much banana is added and how dry your rice is. If your batter is runny, just let it sit for 5mins so the rice can absorb the extra liquid.



**SERVINGS 10
TIME
10 minutes prep,
15 minutes bake**

PER SERVING
(1muffin)
Energy 77cal
Fat 1g
Sodium 36mg
Carbs 15g
Fibre 1g
Protein 2g



MID-RACE



POST-RACE



SPANISH CHICKEN AND TOMATO STEW

- 1 tablespoon olive oil
- 1kg boneless, skinless chicken thighs, cut into cubes
- 1 cup (225g) chorizo or Italian sausage
- 1 cup (75g) carrots, chopped
- 1 cup (175g) tomatoes, diced
- 1 onion, chopped
- 2 mild green chilli peppers, chopped, seeds left in
- 2-4 cups (480-960ml) chicken stock or water (see note)
- chopped fresh parsley to garnish
- OPTIONAL ADDITIONS
■ 1 can (410g) cannellini beans

- 1 Make this simple stew before your ride so that you can enjoy it afterwards. The recipe calls for boneless and skinless chicken but you can use bone-in meat if you prefer.
- 2 Pour olive oil into a heavy pan and set over medium-high heat. While the oil is heating, sprinkle salt and pepper over the chicken.
- 3 Add sausage to pot and brown thoroughly. Add chicken and cook about 5-6 minutes, until browned.
- 4 Add vegetables and 2 cups chicken stock, cover pot with lid, and bring to a rolling boil. Reduce heat to medium and

leave to simmer for 45 minutes. Add salt and pepper to taste.

- 5 Add the beans, if using, just before serving and garnish with parsley. Serve with warm polenta or steamed rice.

SERVINGS 4
TIME 1 hour

PER SERVING
Energy 543 cal
Fat 31g
Sodium 226mg
Carbs 10g
Fibre 2g
Protein 53g

NOTE To prepare in a slow cooker, first cook the meat as instructed in steps 1-3, but simply sear the meat until it is lightly browned on each side. The meat will not be cooked through. Transfer the meat along with the other ingredients and an additional 2 cups of chicken stock to the slow cooker and cook on low for 3-4 hours.

RECOVERY GRILLED CHEESE

- 1 tablespoon soft cream cheese
- 2 thick slices of bread
- dash of ground nutmeg
- 4 thin slices Swiss cheese
- 50g preserved roasted red peppers or green chillies, drained
- olive oil

OPTIONAL ADDITIONS

- grilled asparagus
- cooked bacon
- sun-dried tomatoes
- goat cheese
- truffle oil



SERVINGS 1
TIME 10 minutes

- 1 Spread cream cheese onto two slices of bread (these are the sides that will be matched together).
- 2 Sprinkle ground nutmeg on top of the cream cheese, then top with slices of Swiss cheese and a few pieces of roasted red pepper or green chillies.
- 3 Put sandwich together; brush olive oil on the outsides, and grill in a hot sauté pan until cheese is melted and bread is golden brown on both sides.

PERSERVING	
Energy	686 cal
Fat	38g
Sodium	1,033mg
Carbs	58g
Fibre	6g
Protein	32g



SERVINGS 12
TIME 10 minutes
prep, 20–25 minutes
in the oven

PERSERVING (1 muffin)	
Energy	107 cal
Fat	4g
Sodium	402mg
Carbs	13g
Fibre	1g
Protein	5g
Water	53%

SAUSAGE & POTATO CAKES

- 3 large potatoes, peeled and cubed
- 100g chicken sausages
- ¼ cup (40g) minced onion
- 4 eggs
- ½ cup (60g) flour
- 1 teaspoon salt
- 1 teaspoon ground cumin
- 1 tablespoon grated parmesan
- 1 tablespoon chopped fresh basil or parsley (optional)

- 1 Heat oven to 180°C (350°F). Lightly coat a muffin tin with non-stick cooking spray.
- 2 Place the potatoes in a microwave-safe bowl with a splash of water and cover with plastic wrap. Cook on high in the microwave for 3–5 minutes. (Or boil on stovetop until tender. Drain thoroughly.)
- 3 In a dry non-stick sauté pan over medium heat, brown the sausages, then add potatoes and onions, cooking until potato edges begin to crisp. Set aside and leave to cool.
- 4 Mix together eggs, flour, salt, and cumin. Add basil or parsley, if using. Beat the mixture until the eggs become light, then add to the potato mixture.
- 5 Press mixture into muffin tin, sprinkle tops with parmesan and additional chicken sausage if you like, and bake 20–25 minutes or until a toothpick or cocktail stick inserted into the center comes out clean.

SPORTIVE MEAL PLANNER

TEAM SKY NUTRITIONIST NIGEL MITCHELL ON THE IDEAL NUTRITIONAL INTAKE FOR RACE DAY PERFORMANCE

'For events like 50 or 100 mile sportives, you need good pre, in-race and recovery nutrition,' says Mitchell. 'Experiment in training with what works for you and hone your eating strategy ahead of the event,' adds Mitchell. From two days before the event, follow his schedule based on a 7.30am start for a seven hour ride...

2 DAYS BEFORE

BREAKFAST Porridge or wholegrain bread and scrambled eggs with fruit, and yogurt.

LUNCH Jacket potato, pasta salad or pitta bread.

DINNER Rice or pasta with lean meat; yogurt with fruit for dessert.

1 DAY BEFORE

BREAKFAST As previous day.

LUNCH If you're travelling to the start, prepare a wholemeal bread sandwich or wrap to take with you.

SNACK Fruit and unsalted nuts.

DINNER 12 hours before your start time, take on lighter protein such as chicken or fish, with pasta, rice or potatoes.

RACE DAY – 6AM

BREAKFAST Eat 90mins before start time: porridge with fruit and pistachio nuts or an omelette for slow release energy. Drink coffee and water or isotonic sports drink.

START – 7.30AM

DRINK Aim to take on 750ml of fluid per hour. Don't rely on feeling thirsty to tell you when you need to drink, especially if it's a cold day. Plan to drink 250ml of fluid every 20mins.

SNACKS Keep your energy levels topped up with 60g of carbs per hour (ideally, you should plan to take 30g of carbs every half hour). The following all contain around 30g of carbs:

- 1/2 a flapjack
- 3 jaffa cakes
- 50g dried fruit, eg apple, raisins, apricots
- 5 jelly babies
- 3 fig rolls

CAFÉ/FEED STATION STOP – 11AM

EASE OFF THE FUELING in the 30mins before you reach the feed station if you plan to stop there. When you get back on the bike, continue to aim for a 60g carb re-stock through each hour – though the intensity of the ride and the conditions will influence this. Keep drinking consistently.

AFTERNOON – 1.30PM

USE ENERGY GELS LATER IN THE RIDE. Some riders like to use caffeinated products to give them a boost entering the final hour. Stick to brands of gels that you've used in training – you may not get on with unfamiliar products.

END OF RIDE – 3PM

AT THE END OF YOUR RIDE TAKE ON A 500ML–750ML PROTEIN AND CARB RECOVERY DRINK. Then have a meal within two hours consisting of some quality protein and carbohydrates. This is to replace muscle glycogen and help repair muscle damage. High GI carbs are best, so we're talking scrambled eggs on white toast, rice with chicken and vegetables, or tuna pasta.



ELIZABETH'S GOLDEN AGE

Britain's most talented female road cyclist Lizzie Armitstead has the Tour of Flanders, the Worlds and Rio in her sights. She tells us why she's ready to rule

WORDS: MARK BAILEY PHOTOGRAPHY: LIZ SEABROOK

You can take the girl out of Yorkshire but you can't take Yorkshire out of the girl. Hours before we speak to Lizzie Armitstead, the Otley-born cyclist took a spin along the sun-drenched coast of her adopted home, Monaco, where on training rides she has been known to leave bike-mad F1 driver and fellow resident Jenson Button eating dust. But while most inhabitants of this gleaming metropolis crave luxury and indulgence, Armitstead spent her ride dreaming of the mud, rain and jaw-rattling cobbles of next month's Tour of Flanders – a brutal one-day race that carries irresistible echoes of her native Yorkshire.

'The Tour of Flanders is one of the most iconic races in cycling and it's a major goal for me this year,' says Armitstead. 'If you tell someone you have won the Tour of Flanders, it means you're a tough, gritty cyclist. It's notorious for bad weather and hard cobbles.' A bit like Yorkshire then? 'Yes! It's very similar terrain so I love it for that reason too.'

The 26-year-old, who rides for the Dutch team Boels-Dolmans, moved to Monaco for the year-round training weather and challenging climbs but her heart remains in picturesque Wharfedale with its windswept moors. 'My home will always be Otley, but Monaco is a valuable place for me to be right now,' she says. 'Waking up every day to blue skies has a massive influence on my training and the hills help my cycling abilities.'

|| WHILE OTHER RIDERS WILT IN RAIN, ARMITSTEAD BLOSSOMS

Elizabeth Mary Armitstead will forever be remembered by the British public as the first home medallist of London 2012. The image of her dashing through a biblical downpour to claim a silver medal in the road race was one of the most warming of the Games.

It was an achievement built on talent and tenacity; while other riders wilt in the cold and rain, Armitstead blossoms. As Sir Dave Brailsford once declared, 'She's got courage – she's very, very fearless.' Just minutes after her Olympic euphoria, she was already thinking about upgrading her medal to gold at the Rio Olympics in 2016.

Gearing up

Over the last year, Armitstead has shown signs of moving from the role of princess in waiting to the new queen of women's cycling. Her progress is obvious from her recent success, which included gold in the road race at the 2014 Commonwealth Games in Glasgow, and overall victory in the 2014 UCI Women's Road World Cup (a series of nine races, of which Armitstead won the Ronde van Drenthe and came second three times).

But her world-beating potential was even clearer in the manner of her defeat at the 2014 UCI Road World Championships in Ponferrada, Spain, last September. Despite opening up a 14-second advantage in a breakaway alongside exalted talents Marianne Vos, Emma Johansson and Elisa

Longo Borghini, her opponents, fearful of Armitstead's flying form, refused to collaborate, allowing the peloton to catch up and set up a sprint finish that left the Brit seventh. Armitstead's card had been marked.

'I was gutted, but now my aims are just the same as last year because I didn't achieve two of them,' she says. 'I want to win Flanders and the World Championships [in Richmond, USA, on 26 September]. I also want the National Championships [in Lincolnshire on 28 June] but as that is mid season I won't push for it, I'll just hope my form will take me there. I'd love to get gold in Rio; over the winter my focus will switch to that.'

Armitstead says she has worked on her sprint and strength over the winter and feels she will be tactically smarter after the



experiences of the last few years. 'I remember seeing some of the attacks Marianne [Vos, the Dutch cyclist who beat Armitstead in the road race at London 2012] made over the top of climbs and after working on that I know I can follow those moves – and make them myself.'

Her 2015 season began well when she won the points race at the Revolution track meeting in Glasgow in January. 'Glasgow seems to be my lucky charm,' she says, referring also to her second National Road Race title in 2013 and her Commonwealth gold last year. 'I just did Revolution for a bit of fun so my family could see me race in a nice environment.'

She followed it up in February's Tour of Qatar by winning two of the four stages to take overall victory and the points classification. It was a shock,' she says. 'I didn't expect to win the whole tour, I just went there to mix up the training. Strength work over the winter has obviously helped my sprints, even though I've not yet put the finishing touches to it. But it's a good start to the year and I'm very happy.'

Bringing it home

Armitstead first sat down with *BikesEtc* a few months earlier in London, having arrived at a Marylebone café with a suitcase, in between a holiday in Barcelona and a busy winter training block. She revealed that on trips home she likes to train with her older brother Nick, an amateur racer, and other local riders. 'Tuesday and Thursday-night chain gangs in Leeds are hard, and the Saturday race to the café is always brutal.'

On these rare visits to the UK, Armitstead is equally spellbound by the effects of the national cycling revolution. 'It's surreal,' she says. 'When I started out, Otley Cycle Club was full of old blokes. I was too nervous to go, so I trained on my own. The other week when I was home, one of the young Otley Flyers told me she is one of a huge group of juniors at the club. Things have really changed.'

With her naturally athletic physique, quiet confidence and playful competitiveness,

AT SCHOOL, SHE WAS MOTIVATED MORE BY THE CHANCE TO BEAT A BOY THAN BY A LOVE OF CYCLING



Armitstead reminds you of that popular, ponytailed girl at school who kicked everybody's backside in PE. The one the boys were happy to race and the girls all wanted to be friends with. And that's very close to the real story of how Armitstead discovered cycling in the first place – or, more accurately, how cycling discovered her.

A natural runner, Armitstead was already beating teenagers in the Otley fun run at the age of five and finishing 10k races aged 13. She competed in the 800m and 1500m athletics events at regional competitions and even played in goal for Prince Henry's Grammar School football team. Her first bike was purple with a white basket but she hadn't pedalled for years when, aged 15, she saw scouts from the British Cycling talent team show up at her school and offer everyone the

opportunity to take part in a fun trial ride.

Motivated more by the chance to dodge maths and beat a boy who had challenged her to a race than by any ardent love of cycling, she started dashing around the makeshift cycle track marked out with plastic cones. It proved to be a life-changing moment. 'She smashed the endurance tests and the sprint trials,' her PE teacher Pete Latham later recalled. 'She only came out because she had been teased by one of the lads in her year that this guy was going to beat her.' Of course, she beat him.

More in-depth tests followed, including power assessments and psychological reports, and Armitstead was soon fast-tracked to the Olympic talent team. 'I can recall that day perfectly,' she says. 'Above all, I remember my coach, Phil West, who spotted my potential. He's been a mentor ever since.'



LIZZIE'S BIKE

The best girl-racer in town
SPECIALIZED S-WORKS AMIRA SL4

'As a bike rider you have to advocate the equipment that you are using and you sometimes feel like a fraud if you have to talk about a bike that you hate. I have had to do that in the past. But if I could genuinely choose any bike to buy it would be this one. It is specifically designed for a woman's body shape, but where companies often go wrong with women-specific stuff is by making it less high-end or by compromising on performance. This is the best you can get and I love riding it.'



LIZZIE'S TOP 5 TRAINING TIPS



STAY FLEXIBLE

'If the weather is bad I might do a shorter ride, and on a clear day I might do twice as much as I planned. Being flexible is a good idea. If you're too fixed in, you might lose motivation.'



FUEL UP

'I am a vegetarian, and the night before a ride I enjoy a nice risotto or a stew with lentils and beans. For breakfast I will have porridge or muesli. Iron supplements and multivitamins help keep me free from illness.'



HIT CAPACITY

'Capacity efforts make good spring training. Just higher than threshold efforts, they involve three five-minute bursts. They're tough but they really boost your fitness.'



TARGET YOUR CORE

'A lot of exercises you do in the gym can also be done on the bike. Try one-armed climbing, in which you aim to keep your body as still as possible while you're pushing uphill. It works your core while you ride.'



GET OUT EARLY

'If you have breakfast while watching the telly and then look out at the grey sky, you've left it too late. Get out before you start thinking. It's good to meet someone – you're less likely to let another person down.'

On track to success

Track cycling is traditionally the key focus during any British Cycling apprenticeship, given the importance of National Lottery funding and the multiple Olympic medal opportunities available. Within a year of taking up the sport Armitstead had won a silver medal in the scratch race (a mass-start event in which the aim is simply to be first over the line after a certain number of laps) at the 2005 Junior Track World Championships. She went on to take the Under-23 European scratch race title in both 2007 and 2008. In 2009, aged 20, she won gold in the team pursuit at the senior Track World Championships. Symbolic of her tough spirit,

she crashed in the scratch race but hopped back on her bike to claim a silver medal. 'To have a young rider who's disappointed with a silver medal after a crash tells me she's exactly the sort of rider we want,' declared one of her coaches, Dan Hunt. Armitstead also took bronze in the points race, even though she could hardly move her fingers after the crash.

Despite her track success and the allure of Olympic medal opportunities in the velodrome, Armitstead's real passion lay on the road, and this better suited her endurance and independent personality. But there was no clear pathway for female cyclists on the road, so she moved to Europe in 2009 to try to make it as a pro. From 2009 to 2012 she





raced for Lotto-Belisol, Cervélo Test Team and AA Drink-leontien.nl before joining Boels-Dolmans in 2013.

Looking back, she is convinced this tough journey has given her additional strengths. 'Independence is a huge factor and that is what many at the pinnacle of their sport are missing,' she says. 'A lot of people are spoon-fed success and not having that has given me a better understanding about the needs of the job and about myself as a cyclist.'

Strength and stamina made Armitstead a natural on the road. She won the National Road Race in 2011 and 2013, and took Gent-Wevelgem and Omloop van het Hageland in 2012, before claiming silver at London 2012. Suffering a hiatus hernia in 2013, she endured sickness and pain throughout the season but fought back to have her most successful season yet in 2014.

Gender agenda

Crafting a career as a professional female cyclist is not simple. The disparity in pay and status between male and female cyclists is well documented and, on paper, can seem callously unfair. As one of the higher-profile female cyclists, Armitstead fares better than most, but she isn't too proud to sell old bits of bike kit online when she no longer needs them. The lifestyle demands of a pro cyclist can be taxing, too: she was devastated to miss her niece's christening and gets routinely told off by friends for skipping birthday parties.

Armitstead is refreshingly honest. Ask

her a question and she will give you a straight answer – an admirable but rare quality in modern sport. After the Olympics in 2012 she declared, 'The sexism I have encountered in my career can be overwhelming.' She has spoken articulately about the problems faced by female riders, and has become a spokesperson for any issue involving women's cycling. She seems a little weary of the gender inequality issue, perhaps aware that any seismic shifts will take a long time to arrive. 'We have good and competitive races but it's media coverage and sponsorship that we're lacking,' she explains. 'That takes time and investment, and it won't happen overnight.'

Armitstead faces challenges with stoical Yorkshire grit. 'One of the silver linings of not having a women's Tour de France was that I could watch last year's event in my hometown of Leeds, so I got to be a real fan,' she says. 'It was just incredible and it reminded me how lucky I am to do this as a job.'

Buoyed by her enhanced strength and speed, her impressive early-season form and her growing medal count, Armitstead is hoping 2015 will be a year to savour. Not that she makes a habit of wallowing in glory: 'I have kept all my medals and one jersey from each team I have raced for, but I gave away almost all of my kit from London 2012,' she says. 'My future kids won't be very happy about that.'

If her career continues on the same trajectory, such a regret is unlikely to form more than a minute footnote in her life story. Armitstead has a Tour of Flanders title, a World Road Race rainbow jersey and an Olympic gold medal to hunt down. And, as the boy who challenged her to a bike race at Prince Henry's Grammar School on that fateful day back in 2004 quickly discovered, it would be a bad idea to underestimate her. *Lizzie is exclusively managed by MTC (UK) Ltd. Visit mtc-uk.com. The women's Tour of Flanders takes place on Sunday 5th April, the same day as the men's event. For more information, see rondevanvlaanderen.be.*

THE ROAD TO GLORY

The highlights of Lizzie's career to date



2012
Olympics

Riding through the rain en route to silver (and GB's first medal) in the road race



2013
National
Championships

Enjoying victory in the road race and second place in the individual time-trial



2014
Commonwealth
Games

Winning the road race after a final-lap solo attack, set up by teammate Emma Pooley



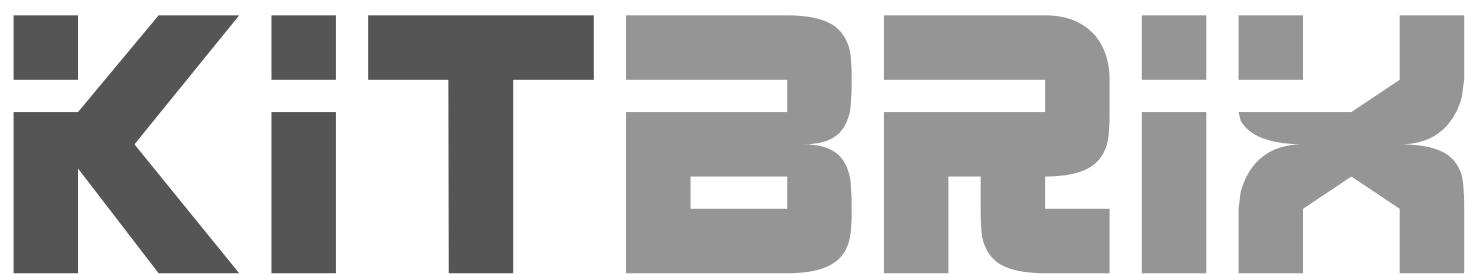
2015
Revolution,
Glasgow

Riding to first place in the UCI Women's points race at Sir Chris Hoy Velodrome



2015
Tour of Qatar

Taking two of the competition's four stages and claiming overall victory



"Whether you are looking to kit out a sports team or organise your race day apparel the Kitbrix bag is a great, multisport organiser."

Sigma Sport product review



"Created to cut out the faff in kit organisation. Heavy duty construction and high durability with useful pockets and pouches to find all your kit easily and even converts to a rucksack for short trips or for triathlon transition areas"

Leading outdoor magazine product review



"Its a yes! These bags are worth their weight in gold. 1 x brix holds helmet. full cycle wear. shoes. hardshell, gels, food and more. Plus I can see ALL my kit when open."

National newspaper product review



RACE OF TRUTH

WORDS PETER STUART PHOTOGRAPHY GEORGE MARSHALL

For some, cycling is all about going fast, and the time-trial is the ultimate test – just you against the clock

ON TEST

BMC Timemachine
TM02, £2,000



Planet X Exocet 2,
£2,000



In the wide spectrum of the sport of cycling, time-trialling is probably the most alien to the onlooker. With slippery skintight suits and long-tail helmets, the time-trialist resembles nothing so much as a Xenomorph from the *Alien* movies. But behind the bizarre exterior lies the oldest and truest form of competitive cycling.

The time-trial (TT) comes in all shapes and sizes, and in the modern age it has morphed across mediums. After all, what's a Strava segment if not a never-ending, unmarshalled TT? Sportives, too, have become flooded with riders seeking a quick time. But at the heart of the sport is the formal time-trial. We've all seen it at the Tour de France – with starting gates, closed roads and helicopter coverage – but the reality, for most, is far more modest.

The UK is the centre of the world when it comes to the time-trial, with more participants, more events and a greater history than anywhere else. Most clubs run a TT on local courses, while criterium circuits often double up as time-trials on summer evenings.

Racing one doesn't necessarily mean owning a TT bike, a pointy

helmet or a skinsuit. 'You don't need that stuff when you're starting off, and you wouldn't even look odd turning up to your second TT without it,' says Michael Hutchinson, multiple National Time Trial champion, holder of half a dozen records and author of *Faster* (£12.99, Bloomsbury), his first hand account of cyclists' quest for speed.

Your needs for speed

While the famous 'n+1' rule means that owning just one more bike always seems necessary, jumping straight into buying a TT model is a pretty big commitment. But there's a range of things you can do to bridge the speed difference between a standard road bike and a TT setup. 'The first thing most people do is buy a pair of tri bars [aerodynamic handlebar extensions],' Hutchinson explains. 'Then, oddly, they buy an aero helmet, which doesn't make much difference but I suppose it looks the part.'

'Wheels, on the other hand, do make an improvement. A nice carbon deep-section pair might not seem like a priority, but if you've got lightweight climbing wheels, there can be big gains →'





The componentry may be basic, but the TM02 has a world-class frame that's been wind-tunnel tested and raced on at the World Tours



by making the switch.' And, as awkward as it looks, skintight clothing can make the most significant improvements to overall speed.

So, now you have your aerodynamic setup dialled in, next comes the race. The time-trial is something of an institution; a landmark on every rider's journey to being a fully fledged cyclist. At the end of the 19th century, in reaction to a ban on cycle racing on public roads, Frederick Thomas Bidlake set up a society of time-trialists that met at dawn in secret to race against the clock. Like the underground raves of the early 1990s, locations and entrants were only given at the last moment. The secrecy continued into the 1960s, and even today courses are named by special codes, while entry to national open events requires affiliation to the CTT (Cycling Time Trials association, cyclingtimetrials.org.uk). TTs are commonly raced over 10, 25, 50 and 100 miles. There are also longer endurance events spanning 12 and 24 hours, and an array of 'sporting' courses over more undulating terrain that can be of any distance.

Cyclists were once judged so closely by their TT pace that, until the 1980s, time-trials formed the most competitive aspect of the racing season, and the BBAR (Best British All Rounder) award for the highest average speed across 50 miles, 100 miles and 12 hours was the most prestigious of the year.

Trial and revolution

Historically, a time of one hour for the 25-mile TT was considered the mark of an accomplished rider. Today, the TT scene is more niche, but with improved technology it is also significantly faster, with the top 25-mile times at large open TTs gravitating around 50 minutes. That may sound daunting, but there are lots of smaller local races to start you off. 'The CTT website isn't terrific but you can find contacts for clubs and events that allow you to just turn up and have a go,' says Hutchinson.

If you do catch the bug, it won't be long before you begin to experiment with equipment, position and pacing strategies – all of which can come together to shave off ➤

IMPROVED TECHNOLOGY MEANS THE TOP 25-MILE TIMES NOW GRAVITATE AROUND 50 MINS





TRAINING TIPS

Tweak your technique – every second counts

POSITION

'The best time-triallist isn't necessarily the most powerful or aerodynamic,' says Simon Smart, aerodynamicist to pro TT specialists Tony Martin and Alex Dowsett. 'It's about efficiency – balancing how much power you lose in an aggressive position with how aerodynamic you become.'

PACING

In time-trials, there's no peloton to hide in. Keeping a steady power output is best. Indoor training can help to find a 'functional threshold', an output that you can stick to for the duration of a race.

HANDLING

'Stability is important,' says Smart. 'You can gain 20-30 seconds if you can stay on the tri bars through the corners.' Practising this while in the aero position should boost your confidence.

BMC Timemachine TM02, £2,000

The perfect purchase for time-triallists looking to upgrade over time

Founded by the hearing-aid billionaire Andy Rihs, BMC is a giant of the high-end cycling industry. Its pro team is a showcase of TT strength, with Cadel Evans winning the 2011 Tour de France on the back of his TT ability. BMC bikes have consistently been the subject of critical praise and pro racing success. With the TM02 mostly identical to the World Tour-winning TM01, we were excited to try the product of World Tour tuning and wind-tunnel testing.

Frame

On paper, the frame is in a different league from the Exocet (overleaf), having gone through rounds of wind-tunnel testing and racing at World Championships and Grand Tours. While the TM02 is a downgrade of the pro-level TM01, the differences are minimal – most notably, the TM01 has an integrated front end, the stem, steerer and headset combined into a single aero unit, and a less stiff grade of carbon has been used for the TM02. But these differences mean the TM02 is actually a better choice for fledgling time-triallists, as its bars and stem are adjustable and the frame is more comfortable over rough surfaces – key, given the precarious position adopted on the extension bars. Size is an issue: the medium and medium/large had too short a top and head tube for our 6ft 2in tester, and the large is drastically bigger, suited to a much taller rider.

Components

To offset the cost of the frame, the componentry is basic. The Shimano 105 groupset is flawless but the Profile Design T2 Wing handlebars and extensions are underwhelming

in terms of aerodynamics. The long, wide wing bars don't do much for riding position when sitting up, but do offer easy adjustment. The seatpost is impressive but the saddle cradle is infuriating, requiring a 13mm wrench to tweak position and incline. The Fizik Ardea Tri saddle feels too chunky to give support in such an aggressive position.

Wheels

The Shimano WH-RS010 is one of the cheapest road wheels commercially available across any brand. Retailing at around £100, we didn't expect much, and there's little doubt these wheels suffer an aerodynamic and weight penalty, exacerbated by the entry-level Continental Ultra Sport tyres. They are a major dampener in terms of overall speed, and would need to be upgraded to compete.

The ride

In contrast to the Exocet, the TM02 doesn't leap up to speed. It cruises at a high pace but needs to be squeezed up gradually over several minutes. On an out-and-back 25-mile TT, that probably wouldn't be a bad thing. In terms of handling the TM02 is

remarkable, largely down to the intelligent construction of the frame. It is easy to take corners sharply and descend with confidence – both crucial when you're against the clock on a technical course. The problem is that it simply isn't that fast, but with a change of wheels we weren't surprised to see speeds rocket. The frame is an exceptional offering, but the build should be treated as a work in progress. At this price, though, it's a rare opportunity to ride the same frame as World Tour stars.

RATINGS

BMC TM02

Rating

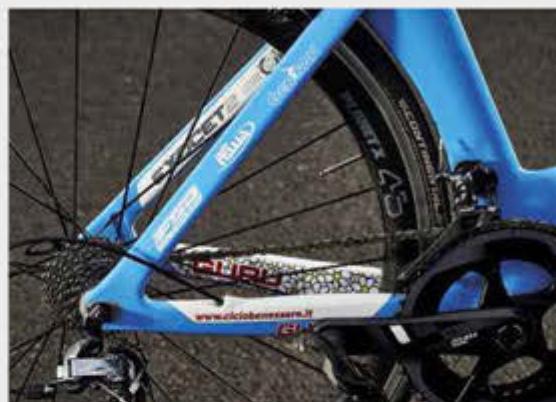


minutes over 25 miles, even before you start getting any fitter. Position is so subtle an art that many enthusiasts will happily spend more than £1,000 for a two-hour wind-tunnel session – such is the draw of marginal gains.

While the idea of power meters and wind-tunnel analysis may be intimidating, there's not much in the way of TT training that can't be done with a heart-rate monitor and cadence meter. Most of the time, though, it's not about beating others. 'At the beginning, people just race themselves,' says Hutchinson. 'They turn up one week, see their time, and then go back the next to compare. Some do that their whole career.'

TTs are also probably the most inclusive of all competitive cycling events, so there's rarely cause to worry about being out of place among an elite field. 'At my local 10-mile time-trial you see everyone from 12-year-old girls to 80-year-old men, all shapes and sizes,' says Hutchinson. 'It's one of TT's glories.'

Time-trial gear will always hold an appeal for riders who fancy going quickly, and that's why it's no surprise to see deep-section wheels and aerodynamic helmets on road bikes. But if you want to go the whole distance and truly test your speed and equipment, a local TT will never be too far away.



TIME-TRIALS ARE INCLUSIVE.
YOU'LL RARELY FEEL OUT OF
PLACE AMONG AN ELITE FIELD

FAST GEAR

ALL THE KIT YOU NEED TO LOOK
THE PART ON YOUR TT BIKE

PRO Missile Evo ski-bend
clip-on bars, £170,
madison.co.uk



Lazer Tardiz
helmet, £150,
madison.co.uk



Galibier Chrono 3
speedsuit, £64,
galibier.cc



Louis Garneau P-09
Aero Helmet, £220,
evanscycles.com



Galibier Aqua Chrono II
overshoe, £21, galibier.cc



Planet X Exocet 2, £2,000

A jump-on-and-start-racing model that's great for beginners

Planet X has existed for 25 years, but only started dabbling in bike frames over the last decade. The Planet X business model has been simple: import from the Far East and sell directly to consumers online. As a result, Planet X frames have proved popular on the time-trial scene, owing to the high cost of big-brand aerodynamic carbon TT frames. The Exocet 2 is the latest development in Planet X's TT arsenal, but can its low-cost operation really stand up to the World Tour players?

Frame Planet X Exocet 2, full carbon frame and fork

Wheels Planet X CT45 carbon clincher

Tyres Continental Grand Prix 4000

Groupset SRAM Force 22

Bars Planet X Stealth

Stem Planet X

Seatpost Exocet aero carbon post

Saddle Planet X

Contact planetx.co.uk

Frame

The Exocet 2 has seen a few minor modifications compared with the Exocet 1, including changes to the seat clamp and cable routing. Planet X says the frame has been designed with NACA (National Advisory Committee for Aeronautics) tubing, and it's not surprising that Planet X has favoured a theoretical approach over wind-tunnel testing: the cost of aerodynamic research is why TT frames can run into thousands of pounds. But aerodynamics is no simple science and while the Exocet looks quick, it could be sacrificing a handful of watts. It weighs a claimed 2,209g, but this won't be a big factor in flat TT races and it didn't feel heavy on the road. For newcomers, it will certainly offer huge gains over a road frame with clip-on bars.

Components

This bike is incredibly well furnished for its price, largely thanks to the use of Planet X's own components. 'The Stealth handlebars were designed in conjunction with Sheffield University's sports engineering researchers to be comfortable, aero and fast,' explains Jamie Burrow,

design executive at Planet X. The own-brand saddle looks racy and provides vital support at the nose, and the seatpost has an interesting clamp system at the saddle, with two anchor points from which the saddle can be moved forward and back, and only one bolt adjusting the tilt angle. The SRAM Force 22 groupset is accurate and easy to use: the shifters require a light click rather than the friction necessary with Shimano's.

Wheels

The Planet X CT45 wheelset uses carbon fairings against the wind, beneath which are aluminium box-section shallow rims. However, these thick fairings come with a palpable penalty: the wheels weigh 1,800g for the pair. Despite this, they feel race-capable and responsive, while reassuring us that they could survive a midwinter pot-holed ride.

The ride

In a mild tailwind on a winter's day, we comfortably sat above 45kmh for a 10km stretch, convincing us that the bike would do service on an open TT. However, for those taking things seriously, although the difference

between the Exocet 2 and the highest-level TT frames may only be a few watts, the art of TT is to minimise losses. Another downside is the harsh response over rough terrain. The stiff build and high bottom bracket that raises the centre of gravity mean the bike feels a little unstable, though its short top tube and head tube allow for an aggressively aero position. Despite minor complaints, this bike proves you can go far in TT without breaking the bank. 

RATINGS

PLANET X EXOCET 2

Rating



OVERALL
7.8
10

The Exocet 2's short top and head tubes allow for an aerodynamic riding position



THE RIGHT HEIGHT



WORDS MAX GLASKIN

Wyatt Earp may have ridden tall in the saddle but that doesn't mean you should. Saddle height affects physiological performance so don't follow the cowboys. Carefully choose a setup that works for you. Get it wrong and you'll be ambushed by the bunch; get it right however, and you'll leave the outlaws eating dust



The distance between the top of the saddle and the pedals is one of the most important measurements on a bike because it determines how well the body's pistons (your legs) work. After all, your legs aren't going to shorten or grow just to conform to the geometry of your bike. Hips, knees and ankles can twist, stretch, bend and flex to accommodate the wrong height but this is like using your lower body as a gimbal-mounted telescope when it should be more like a pair of pistons. It's the wrong solution to a problem that is totally fixable.

The answer is offered by the component on your bike that is the easiest to adjust: the seatpost clamp, which is ironic because once you've got it right, you may never need to touch it ever again. Release, move the seatpost, align the saddle, fasten. Done. As long as it's done right – and there's the rub.

'There's no such thing as the right height for all cyclists,' says Ruth Eyles, British Cycling Level 3 coach and three times national time-trial champion. 'It's different for each cyclist and each discipline. It's a myth that there's a right height for everyone.'

Look at triathletes, for example. 'They tend to have their saddles very high and far forward,' says Eyles. 'It may be because they have less experience at cycling but they do have concerns about the transition from cycling to running and it's thought that a high saddle facilitates that transition.'

Other cyclists do it better. 'A lot of the riders I coach are experienced, so they know what feels right for them,' says Eyles, who although not a bike fitter has decades of racing experience. 'In time-trials they might sit slightly higher and further forward. But when they're riding on the road, they might be lower and further back for better handling and comfort. If they're riding cyclocross, they might also be lower to make mounting and dismounting easier.' In off-road disciplines, a lower saddle allows for better handling.

FUNDAMENTAL CALCULATIONS

While there is no 'one height fits all', every rider can find a position that balances the demands of power, comfort and handling, and there are many ways of finding that perfect altitude for your own posterior. These days, there are scores of professional bike fitters across the country more than happy to take you through the process in detail, but if you want to work it out for yourself, you can simply use the traditional self-fit method: sit on the saddle, with heels on the pedals, and pedal backwards. If your hips rock'n'roll, it's not cool, daddio. Lower the saddle a small amount at a time until it's possible to back-pedal comfortably without hip movement. When it's all set up hunky dory, your hips will be rock solid, with power to the pedals turned up to 11.

The self-fit method is a good enough starting point but this simple, low-tech, non-scientific approach was dismissed 30 years ago. US national coach Eddie Borysewicz reckoned a dimension equal to 96% of outside leg length, measured to the bump sticking out of the side of the hip, is crucial. You can try this for yourself by turning the crank in line with the seat tube and measuring from the top of the lower pedal to the top of the saddle (see 'Saddle Sums' figure B, right). This will usually give you a saddle position slightly higher than the self-fit method.

Greg LeMond, three time Tour de France winner, preferred a different calculation, developed by French coach Cyrille Guimard and based on multiplying the inside leg measurement by 0.883. The result of this sum determines the correct distance between the centre of the bottom bracket and the top of the saddle ('Saddle Sums' figure A).

More recently, the figure of 1.09 has been adopted as the multiplier of the inside leg measurement. Like Borysewicz's method, the result gives the distance from the centre of the lower pedal spindle, when the crank is in line with the seat tube, to the top of the saddle. A study just published shows that 35 cyclists with sore backs suffered much less pain when they adjusted their saddle using this formula.

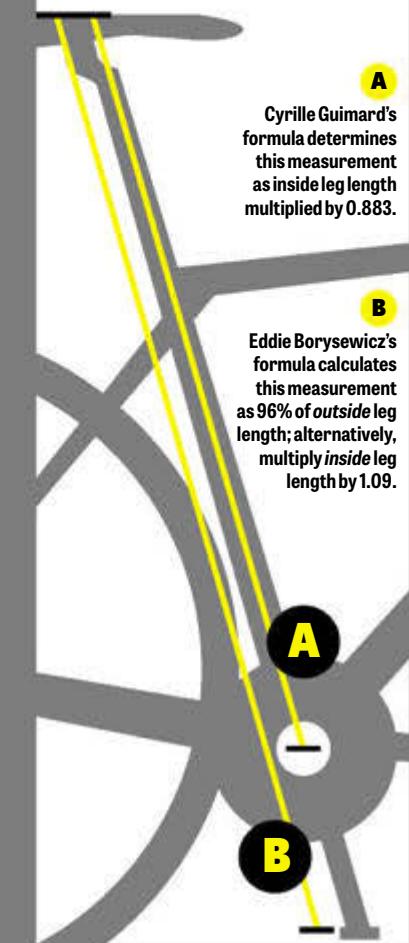
Interestingly, when you apply each of the last two formulae to Greg LeMond's inside leg of 84.3cm, the

THE WRONG SADDLE HEIGHT AFFECTS YOUR PEDALLING – TOO HIGH AND YOU'LL LOSE POWER, TOO LOW AND YOUR THIGHS WILL ACT AS A BRAKE



SADDLE SUMS

Apply one of these formulae to your leg measurement to calculate correct saddle height...



DROP AND GO

Will the MTB fashion for dropper seatposts catch on in road bikes?

HEIGHT-ADJUST OR 'DROPPER' SEATPOSTS – which temporarily lower the saddle when operated – have recently started to appear on road bikes. A twist-click version made by FSA was spotted on Ivan Basso's training bike 18 months ago, while in the US, Specialized offers its Command Post Carbon 35 on its top-end Diverge Carbon Di2, with a bar-mounted lever to trigger 35mm of drop.

These have come to road bikes from their natural home on MTBs via the growing adventure bike market. But why do off-roaders want this facility? To put it simply, because they often come across very steep descents, which are easier to navigate with a lower centre of mass. Lowering the saddle reduces the chance of slipping forward onto the top tube or, worse, going over the bars. It can also be more comfortable, with less wobble, and safer – although it is less photogenic than hanging off the back of the saddle.

Early versions were simple seatpost add-ons such as the Fat Tec Seat Popper, which fitted inside the seat tube like a bedspring, or Joe Breeze's Hite Rite, which clamped externally; these were operated by opening or closing the quick-release seatpost clamp while riding.

Dropper seatposts for MTBs in 2015 are more sophisticated but these are unlikely to catch on with roadies, who don't need as much height adjustment and are more concerned with weight – every extra gram on a road bike has to pay for itself by shaving seconds – although we can't help thinking the great Eddy Merckx would have been interested.

resulting saddle height is almost exactly the same – but only when he was sticking to his normal crank length of 175mm. Try each for yourself and test how they feel over a period of a few weeks.

These days, as with so many other things in life, there's even an app for calculating correct saddle height. The Bike Fast Fit app (iTunes App Store, £3.99) means you don't have to do any maths but you do have to set up your iPhone to film your pedalling action. The video analysis software measures 25 dimensions and angles and suggests adjustments.

BEST SEATS IN THE HOUSE

LeMond, a pupil of Guimard, was a stickler for saddle height and freely commented on other riders, in particular Sean Kelly. Even though the Irish rider won the Paris-Nice seven years consecutively, the Tour de France green jersey four times and the Vuelta, LeMond thought his saddle was too low. 'I'm convinced that if Kelly improved his position he could do even better than he has in the past few years,' wrote LeMond in 1988.

Once the optimum saddle height is set, pro riders are reluctant to change it. Eddy Merckx, though, was an exception. He was seen to adjust his during races. This wasn't done to achieve a power advantage – the great Belgian had suffered injuries to his lower vertebrae in an evening velodrome accident during

a blackout. It triggered back pain when riding and he relieved it by adjusting his saddle height, perhaps compromising his power output at the same time.

GETTING IT WRONG

So many approaches but why bother? 'Saddle height is absolutely crucial. If you want optimum comfort and optimum power, you have to get the saddle height right,' says Adrian Timmis, former Tour de France and Olympic cyclist, who sells and fits bikes at his shop, Cadence Sport in Stoke-on-Trent.

'The wrong saddle height will affect your pedalling. If the saddle's too high, you'll get a dead spot at the bottom of the stroke, your heel will come up, your foot will be clawing and you'll lose power,' says Timmis. 'If the saddle's too low, that's when your quads will flex too much and at the top of the stroke your thighs will hit your torso to act like a brake and you won't have a fluid pedalling action.'

Without realising, people compensate for wrong saddle height. 'Bodies do amazing things to make it feel better,' says Timmis. 'When it's too low you'll push yourself back on the saddle without realising, to extend the legs more. When it's too high you'll ride on the nose more, to shorten the leg extension.'

None of this is good behaviour and cyclists often end up seeking physiotherapy from people like Sabreen Qureshi at Active Physio Clinics in Hove,



HIT THE HEIGHTS

Try this experiment to learn the effects of different saddle heights

After a 15min warm-up ride, ride the same climb three times, once with your saddle at its usual height, again with it lowered 2cm and a final time with it 2cm higher than normal. Try to ride each climb with a similar effort. Start the clock and off you go.

Which position feels more comfortable? Which is faster? Does your heart rate change? When we tried this experiment, the lowest position was marginally quicker and the average heart rate fractionally lower. This suggests there was more power going to the pedals even though we weren't working as hard.

Be warned though, drastic changes are best avoided. When Bernard Hinault raised his saddle from 72.8cm to 73.5cm, he did so incrementally over three years. At the 1983 Vuelta, his saddle was accidentally set to 74cm and caused such a bad injury, he needed surgery and missed the Tour de France.

Generally speaking, riding a bike with saddle too low will cause less damage long term than riding with the seat too high, but it won't do your performance much good – try walking around with your legs bent like a Cossack dancer, and see how far you get. That's why working slowly towards your perfect set-up is a good idea.

East Sussex. 'The most common result of having the saddle at the wrong height is knee injury,' says Qureshi. She's seen so much of it that she's recently qualified as a clinical bike fit consultant in order to be able to treat clients better.

DAMAGE DONE

'When the saddle's too low, the tendon below the front of the knee joint may become painful. This patella tendon connects the quads to the shin bone. It's a tissue with more collagen to absorb strain and is designed to take some load but not to be overloaded,' says Qureshi. 'When it's overloaded it becomes painful and inflamed. This can happen when the muscles of the leg are not working at the optimal angles and is felt mostly when pedalling hard with a lot of pressure, such as cycling uphill.'

The treatment for an inflamed patella tendon consists of exercises to encourage the growth of stronger collagen. 'Until that's done, hard riding and climbing should be avoided,' says Qureshi.

When the saddle is too high, a cyclist may feel pain at the back of the knee because the tendons and neural tissue may be stretched too much. If neural tissue is involved, it could connect with the nerves in the spine and trigger back pain. Lower the saddle to the right height and the body should heal itself.

Although the goal is optimum power to the pedals, there is another factor. 'You must also take comfort into consideration,' says Paul Mill, a British Cycling Level 3 coach who uses Dialed In Motion software and video for bike fitting. 'For short events, for the pursuers and track sprinters who spend less time on the bike in an event, comfort isn't so important,' says Mill. 'They can have the saddle a touch higher to maximise the leg extension and push more power onto the pedals. That's OK if you're just doing 4km but not if you're out there for a 10-mile time-trial and certainly not if you're doing a few hours.'

It's a very personal choice, a balance between comfort, suffering and power. But take the time to get it right and you'll be sitting pretty. 

THE MOST COMMON RESULT OF HAVING THE SADDLE AT THE WRONG HEIGHT IS KNEE INJURY – THIS CAN ALSO TRIGGER BACK PAIN

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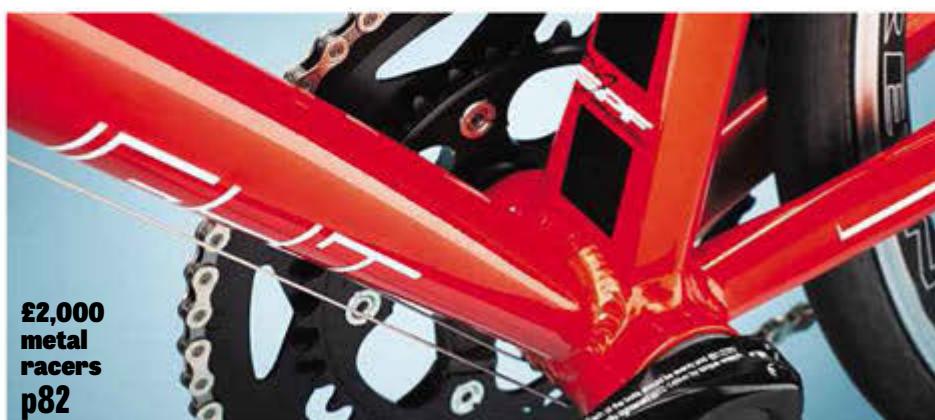
FOR DETAILS VISIT OUR WEBSITE AT RUTLANDCYCLING.COM



ReviewsEtc

Welcome to *BikesEtc*'s reviews section. Whether you're after a bike, kit or clothing, we've put the latest gear through its paces to help you find what's right for you

PHOTOGRAPHY HENRY CARTER, JENNI LESKINEN



THE AWARDS



Best Value

The winner of this award may not have the highest overall score in the test, and it may not be the cheapest, but it will always represent especially good performance at its price.



BEST IN TEST

Best In Test

The overall winner in each group test. Scoring highly in all criteria, it will be an excellent all-rounder. Where two or more items achieve equally high scores, it will be the one that has that extra something – a touch of style, a special feature – that takes the prize.



BikesEtc Gold Award

This prestigious award goes to bikes, accessories, components or items of apparel with exceptional levels of performance, design and build quality that make them must-haves. Don't expect to see it every issue – we only hand it out when it's truly deserved.



FULL METAL BIKES

Stiff, strong and lightweight, carbon fibre loves to hog the limelight. But if you want more bang for your buck it's worth paying metal some attention. We test-drive five racers around £2,000

WORDS ANDY WATERMAN

Over recent years carbon fibre has gone from luxury to ubiquity. Which got us to wondering: can classic steel and aluminium cut it in the modern world? To find out, we looked at three off-the-peg bikes plus two custom builds – when buying from Condor, you start with the frame and spec it to your budget with their bike builder app, while the Kinesis Aithein comes as a frameset only. We asked the supplier to

build it to our price point and our rating is based on the bike as supplied but you can easily adapt the spec to your own needs. Looking at all the bikes, it's obvious how much manufacturers have learned from developments in carbon: pressfit bottom brackets, oversized tubes and tapered head tubes are all technologies from carbon engineering.

There's a phrase that does the rounds at cycling clubs: 'Don't race what you can't afford to replace' –

and that was also a large part in our thinking when we pulled this test together. Yeah, an exact replica of Chris Froome's Pinarello would be nice, but crash it and Froomey gets a new one, while you get a huge repair bill. So steel and aluminium make sense for amateur racers – you get a light, stiff bike at a price well below an equivalent carbon model. If you're keen to try racing, these are the bikes you should consider. No excuses, just fast, stiff, blue-collar racers.

BIKES ON TEST



KINESIS AITHEIN £1,900

CANNONDALE CAAD10
RACING EDITION £1,800

CONDOR SUPER ACCIAIO
£2,150

CANYON ULTIMATE AL
SLX 8.0 £1,799

GENESIS VOLARE 40
£2,000



HOW WE TEST

When it comes to testing bikes, we don't take anything the manufacturers tell us as gospel: the first thing we do when a new bike arrives is to take its measurements and compare our findings with the geometry stated. We also compare the spec with what is advertised – has anything changed?

With the seat and bars moved into roughly the correct positions, we head out to ride a few laps of our local park loop to fine-tune the set-up before the first big test ride. Bigger rides consist of short, sharp climbs, longer seated efforts, descents and a variety of road surfaces.

Every aspect of the bikes' handling and performance is assessed and scored according to our detailed criteria, and then the bikes are passed around the team for an all-important second opinion. Finally those opinions, scores and measurements are collated into the comprehensive reviews you're about to read.

THE OVERALL RATING FOR EACH BIKE IS BASED ON THESE ELEMENTS...

■ FRAME

Our in-house testing questionnaire rates frames out of 30, based on geometry, on-road feel, stiffness, compliance, finish and intended use.

■ COMPONENTS

We rate components out of 20, based on groupset and finishing kit – great bars and stems will be marked down if they're the wrong size for the frame.

■ WHEELS

We rate the wheel and tyres package out of 20, weighting it towards the wheels: tyres come and go but wheels are a more expensive element to replace.

■ THE RIDE

Rated out of 30, we take into account ride quality and also value – does the bike do what we expect of a bike at this price? The best exceed expectations.





Kinesis Aithein £1,900

A versatile UK-focussed DIY option

About the bike

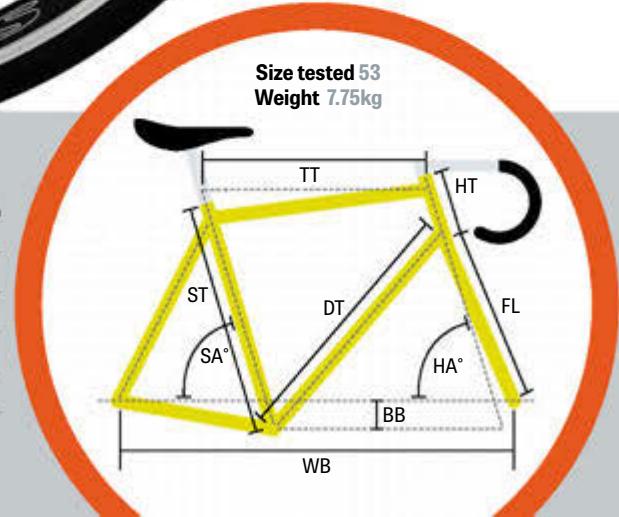
Kinesis's all-out race frame, Aithein, isn't offered as a complete bike but rather as a frame and fork kit that you or your local bike shop can then build with your choice of parts. We presented supplier Upgrade with our £2k budget and they presented us with this build, a mix of its training bike build kit enhanced with some really nice wheels and racier TRP bikes. If you think these choices aren't for you, you can always choose components to better suit your needs and budget.



GEOMETRY

	Claimed	Measured	Head tube (HT)	140mm	140mm
Top tube (TT)	550mm	545mm	Head angle (HA)	72.5°	71.4°
Seat tube (ST)	530mm	530mm	Seat angle (SA)	73.5°	73.6°
Down tube (DT)		602mm	Wheelbase (WB)	985mm	991mm
Fork length (FL)		372mm	BB drop (BB)	68mm	73mm

Size tested 53
Weight 7.75kg





SPEC

FRAME
Kinesis SuperPlastic Formed alu, BB86, tapered head tube, 330g carbon fork

GROUPSET
Shimano 105, 11-speed

BRAKES
TRP R879

CHAINSET
Shimano Fc-RS500, 52/36

CASSETTE
Shimano 105, 11-28

BARS
FSA Vero Compact

STEM
FSA OS-190 stem

SEATPOST
Kinesis carbon

WHEELS
Reynolds Stratus Pro

TYRES
Maxxis Radiale Tubeless, 22c

SADDLE
Kinesis

PRICE
£1,900 as tested
(£650 frameset)

CONTACT
kinesisbikes.co.uk

Frame

The Aithein is made from Kinesium, Kinesis's own enhanced 6000 series aluminium that's reportedly 25 per cent stronger than 6061 alloy for the same weight. This means tubes can be made thinner and consequently lighter, resulting in the 53cm frame we tested weighing in at a claimed 1,138g. At £650 for the frame and a 330g tapered carbon fork, it weighs just a few hundred grams more than the

lightest carbon frames and is on a par with carbon at a similar price point. The downside is the rider weight limit of 89kg (14st). The head tube is tapered from 1.5in to 1.125in and the bottom bracket is Shimano's pressfit 86, an 86mm-wide shell that accepts a 24mm axle. The heart of the frame is the Anti Gravity seat tube, which spreads and squares off towards the BB to increase stiffness. The tubes are superplastic formed, an advanced process that

allows the manufacturer to create non-cylindrical profiles, and the welds are left unsanded and without a secondary finish – which, claims Kinesis, ensures the frame isn't weakened. External cable routing should make the bike easy to maintain, and the slower handling – due to the slightly longer wheelbase than other models on test – makes it good for longer rides over mixed terrain where you can almost run on autopilot. 



FSA bars and stem were supplied here, but we reckon it's worth shopping around

Components

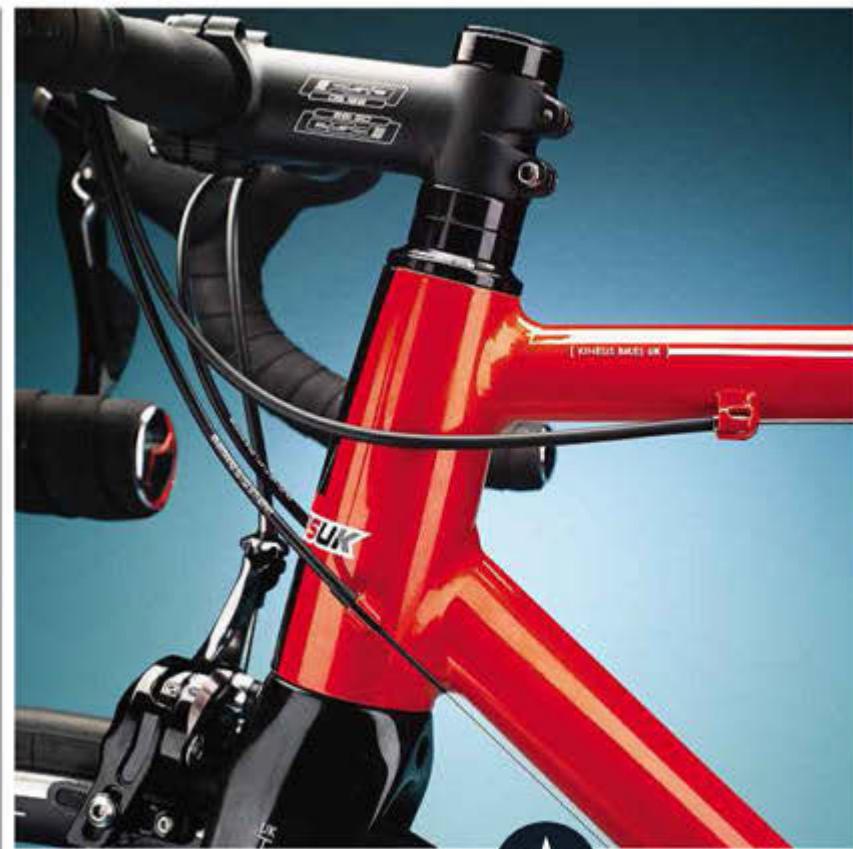
A mix of Shimano 105 11-speed, a non-series chainset, TRP brakes and FSA finishing kit came supplied on our bike. With hindsight, we'd have probably specced a full Ultegra groupset, alloy bars and stem, a carbon post and a lighter, nicer saddle than the Kinesis perch supplied. And we'd build it ourselves: the only specialist tool required is a press to fit the bottom bracket, so it's a simple job most competent home mechanics could take on – and you'd get a true one-off to suit your own needs at a fantastic price. Our back-of-an-inner-tube-box calculations suggest Ultegra, light wheels (such as the Cero AR30 wheelset that won our group test last issue) and decent tyres and finishing kit would come in at less than £2,000 if you shopped around. Even with relatively cheap bars and an overstuffed saddle, the bike came in at a svelte 7.75kg.

Wheels

On our build, the money that had been saved on the finishing kit went straight into the wheels. Reynolds Stratus Pro retail at £650, weigh 1,445g for the pair and feature 21mm external, 17mm internal tubeless-ready rims. If you're a self-funded racer, these are exactly the kind of wheels we'd recommend – light, wide and fast to accelerate. While carbon is de rigueur in racing circles, aluminium braking surfaces still outperform the black stuff, especially in wet conditions – so these remain our choice. Our wheels were set up as tubeless with Maxxis Radiale 22mm tyres, which use radial fibres rather than the more typical bias-cut plies. Radial tyres are rare on bikes: while they are said to be faster and more comfortable, thanks to the lack of transference of sidewall flex into the tread, the drawback can be a feeling of instability on corners. They certainly feel different, and took some time to get used to.

The ride

The first reaction upon setting off on the Aithein is how comfortable it is – it absorbs road vibrations in a way we didn't expect it to. In all likelihood, that is largely down to the tyres used here – which, with their radial construction, flex quite differently from a normal tyre. In fact, at first we were convinced they were soft: the strange, slow steering



and the feeling of separation from the road is quite unusual. But once we got to grips with the vagaries of the rubber, we could start to enjoy the bike. The Aithein has a feeling of versatility: we'd happily race on it but also ride an event such as the Fred Whitton on it (well, as happily as we could, given the distance, gradient and elevation). It's light, yes, and could be built significantly lighter for just a tad more money. Despite the obvious technology and choice of flamboyant orange or green paint jobs, the Aithein remains quite an understated sort of bike; one that's in it for the long haul and will give as good as it gets, but won't encourage any rash decisions from the rider. If you're riding longer races and sportives, that's a very good thing. Spec the Aithein how you want it and you'll have a great companion for everything from racing to riding as far as your legs will carry you. 



Reynolds Stratus Pro aluminium wheels offer fast acceleration and an ideal braking surface

Superplastic forming tech allows tubes to be squared off for rigidity



RATING

FRAME

 Stiff, comparable to carbon in terms of weight

COMPONENTS

 We'd spec alternatives to do justice to the frame

WHEELS

 Light, fast, though the tyres take getting used to

THE RIDE

 Comfortable, versatile and reliable

OVERALL

8.0
10

Once we got to grips with the vagaries of the tyres, we could start to enjoy it

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CAVENDISH





Cannondale Caad10 Racing Edition £1,800

An old-school non-steroidal performance-enhancer

About the bike

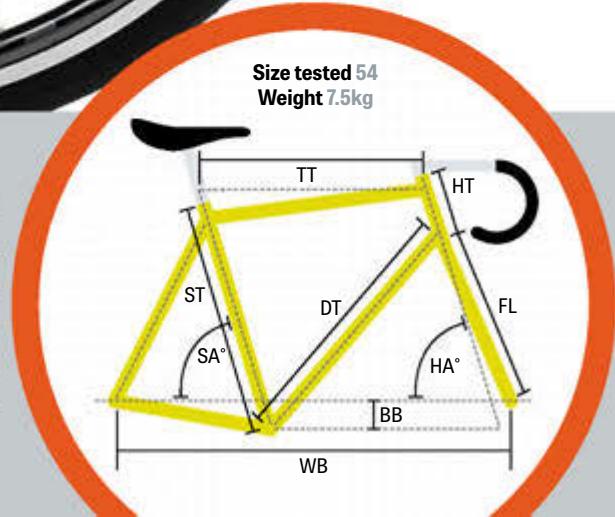
In the late 1990s and early 2000s, images of pro road racing were dominated by Cannondale's bright red aluminium race bikes, ridden by the Saeco team of Mario Cipollini, and Giro winners Ivan Gotti and Gilberto Simoni. The universal move to carbon fibre among the professional ranks meant that Cannondale lost its USP of having the lightest, lairiest, most oversized frames. Has the brand, with its pedigree in aluminium, moved on since the golden years? Let's find out.

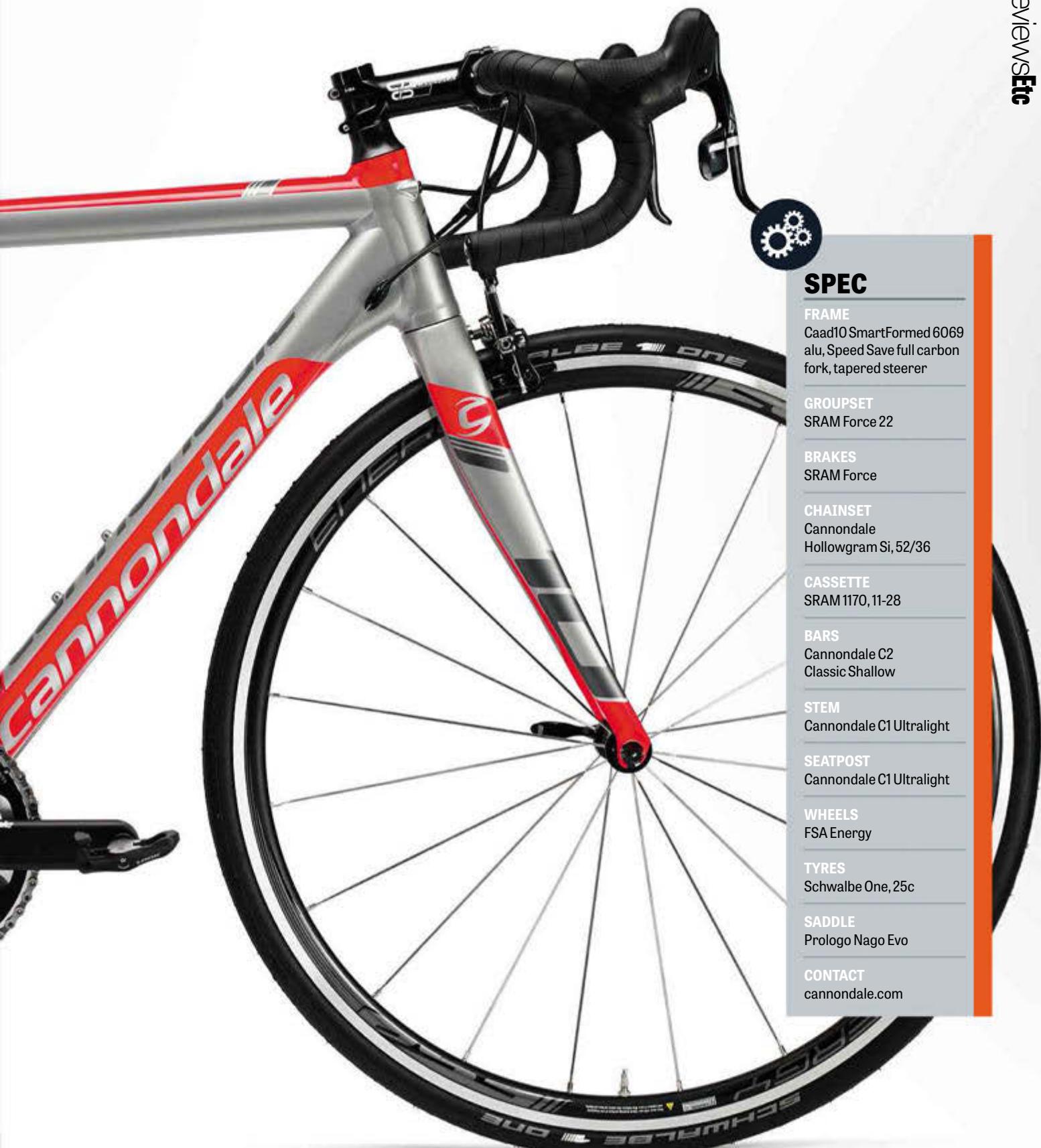


GEOMETRY

	Claimed	Measured	Head tube (HT)	140mm	140mm
Top tube (TT)	545mm	543mm	Head angle (HA)	73°	72.5°
Seat tube (ST)	555mm		Seat angle (SA)	73.5°	73.2°
Down tube (DT)	593mm		Wheelbase (WB)	978mm	983mm
Fork length (FL)	376mm		BB drop (BB)	69mm	74mm

Size tested 54
Weight 7.5kg





SPEC

FRAME

Caad10 SmartFormed 6069 alu, Speed Save full carbon fork, tapered steerer

GROUPSET

SRAM Force 22

BRAKES

SRAM Force

CHAINSET

Cannondale Hollowgram Si, 52/36

CASSETTE

SRAM 1170, 11-28

BARS

Cannondale C2 Classic Shallow

STEM

Cannondale C1 Ultralight

SEATPOST

Cannondale C1 Ultralight

WHEELS

FSA Energy

TYRES

Schwalbe One, 25c

SADDLE

Prologo Nago Evo

CONTACT

cannondale.com

Frame

Cannondale has always been known for its impressive welds, and it's nice to see that's still the case – the junction between tubes is so smooth you'd be forgiven for thinking the Caad10 is carbon. It's not; it's very much aluminium and proud to be – the surface texture of anodised grey sections shows the material in its best light. The tubing has been mechanically shaped and hydroformed to

radically alter the profiles and create an extremely stiff and efficient chassis. Cannondale was the first manufacturer to introduce BB30 (an oversized bottom bracket standard that uses bearings pressed directly into the frame) so it's no surprise to find that here. The head tube is tapered but only from 1.25in to 1.125in, which is narrower than normal but in keeping with Cannondale's other models. The seatstays and chainstays have been

dramatically flattened and narrowed to create what Cannondale calls its Speed Save technology – which basically means there's more vertical compliance to absorb road vibration. Geometry wise, with a 14cm head tube, this is clearly a race bike despite its rather traditional appearance. Lastly, the paint job is magnificent: no camera could possibly do justice to the fluorescent red details which, in real life, are really quite eye-popping.



When it comes to the wheels, it's all in the Schwalbe One tyres, which cope impressively well on gravelly terrain

Components

We don't see a huge amount of SRAM Force on production bikes, which is a shame as it's a good groupset. The brakes in particular are very effective and as a package it's light – even more so when paired with Cannondale's own-brand chainset. Normally we'd turn our noses up at non-series components, but for years Cannondale has been consistently ahead of the curve in chainset tech, and the alloy-armed BB30 Hollowgram Si cranks here are top-notch. FSA chainrings in 52/36 offer the best compromise between compact climbing performance and pro-style flat speed, especially when teamed with an 11-28 cassette. We were interested to see that Cannondale has eschewed fashion with its components, choosing aluminium bars, stem and seatpost. What's more, the bars are traditional round drops – the first we've seen on a production bike in years. Given the racing intent, they're a good choice, altering the rider's position from hoods to drops.

Wheels

Given that everything else is aluminium, it's no surprise to find the wheels are, too. FSA Energy are the lightest aluminium wheels produced by the Italo-Taiwanese brand. They're not feather-light, however – the claimed weight is 1,660g, but they complement the bike's inherent stiffness and spin up to speed well enough. We'd happily race on them without worrying about giving the competition an advantage. The best things about the wheels are the tyres – Schwalbe Ones are becoming a favourite of the *BikesEtc* testing brigade. They roll quickly, grip the road well and seem pretty resilient, too – our first ride included a 5km section along a gravel canal towpath and the Ones coped admirably, not suffering any noticeable cuts.

The ride

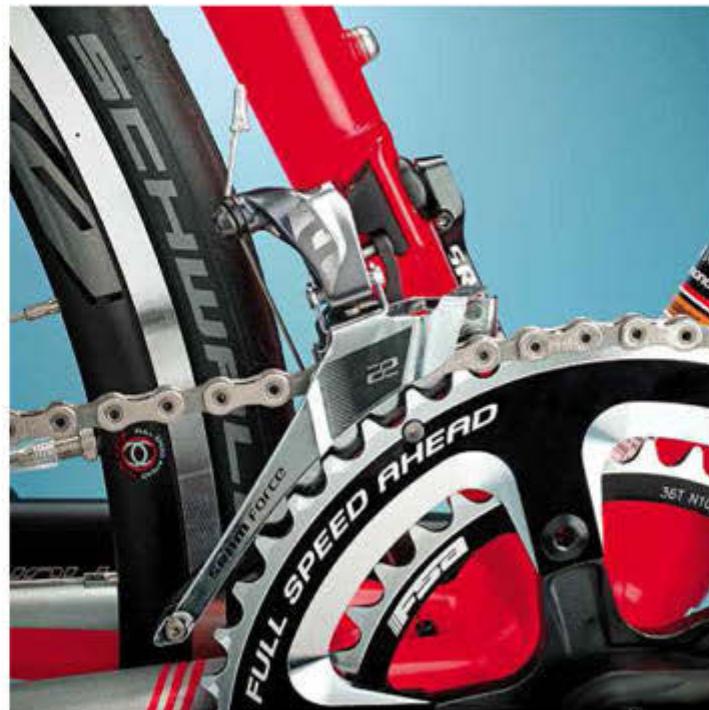
Has someone been slipping performance-enhancing drugs into *BikesEtc*'s tea supplies? Rolling along the flat at 35kmh, something was up – and it was unlikely to be the sudden discovery of raw talent. Having grown up riding and racing on aluminium bikes, we thought the Caa10 would feel familiar, but it didn't: it felt faster and stiffer than



anything we rode back in the day. The fit is at the racy end of what we've come to expect of mass-market bikes, and that compounds the willingness to push faster and faster all the time. 'But wasn't it uncomfortable on the towpath?' asked a colleague from *Cyclist* magazine. The answer: we were going too fast to think about comfort. And when it comes to racing, the same is true – if your bike feels uncomfortable, you're not trying hard enough. The Caa10 Racing Edition is unashamedly competitive, and it's hard to imagine a better bike for amateur circuit races and typical open road races (which last a maximum of three hours). The chassis is up there as the pinnacle of aluminium frame engineering, but it's still affordable like the rest of the kit. None of it is exotic, but it makes for a super light, super stiff racing package. Be warned: if you can't win on the Caa10, you'll have to look beyond the bike for excuses. 🚴



The frame shows off Cannondale's trademark super smooth welds



A 52/36 chainset offers both flat speed and climbing performance



RATING

FRAME

A solid chassis, shaped for maximum efficiency

COMPONENTS

Excellent brakes and a multi-tasking chainset

WHEELS

Decent spin and resilient tyres outweigh the heft

THE RIDE

Speedy, stiff and light – a winning formula

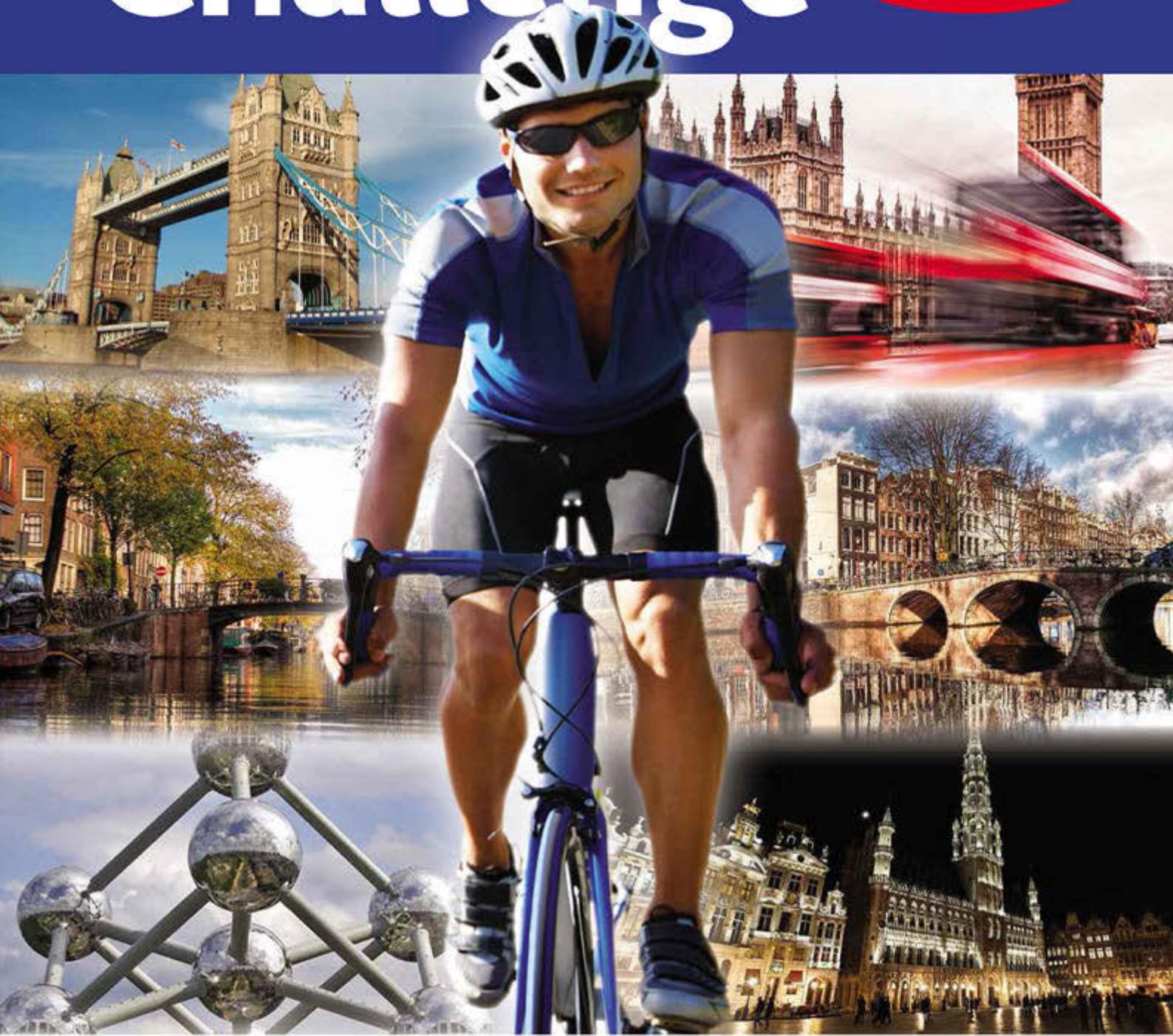
OVERALL

9.2
10

This chassis is up there as the pinnacle of aluminium frame engineering

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Condor Super Acciaio £2,150

In the metal-bike market, this one's a steel

About the bike

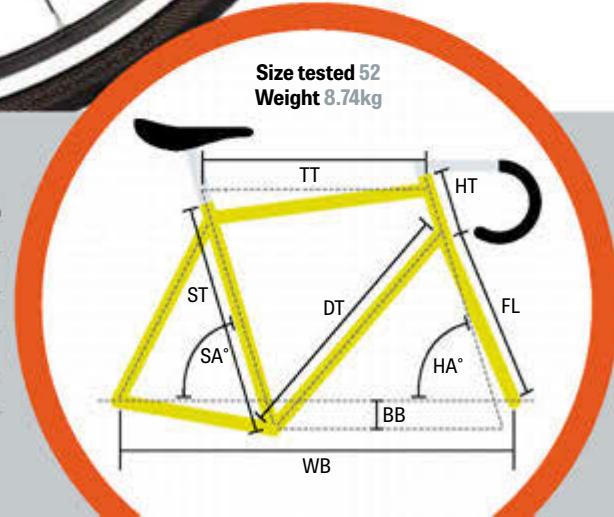
London-based Condor Cycles first showed off this bike in 2010 when then Rapha Condor rider Dan Craven rode a prototype version in criterium races. He liked it so much that this earned the bike the nickname Steely Dan before its official launch in 2011 as the Super Acciaio. Handmade in Italy with customisable spec (as with the Kinesis Aithein, our rating is based on the bike as supplied) and a choice of colours, it even comes with a free bike fit thrown in.

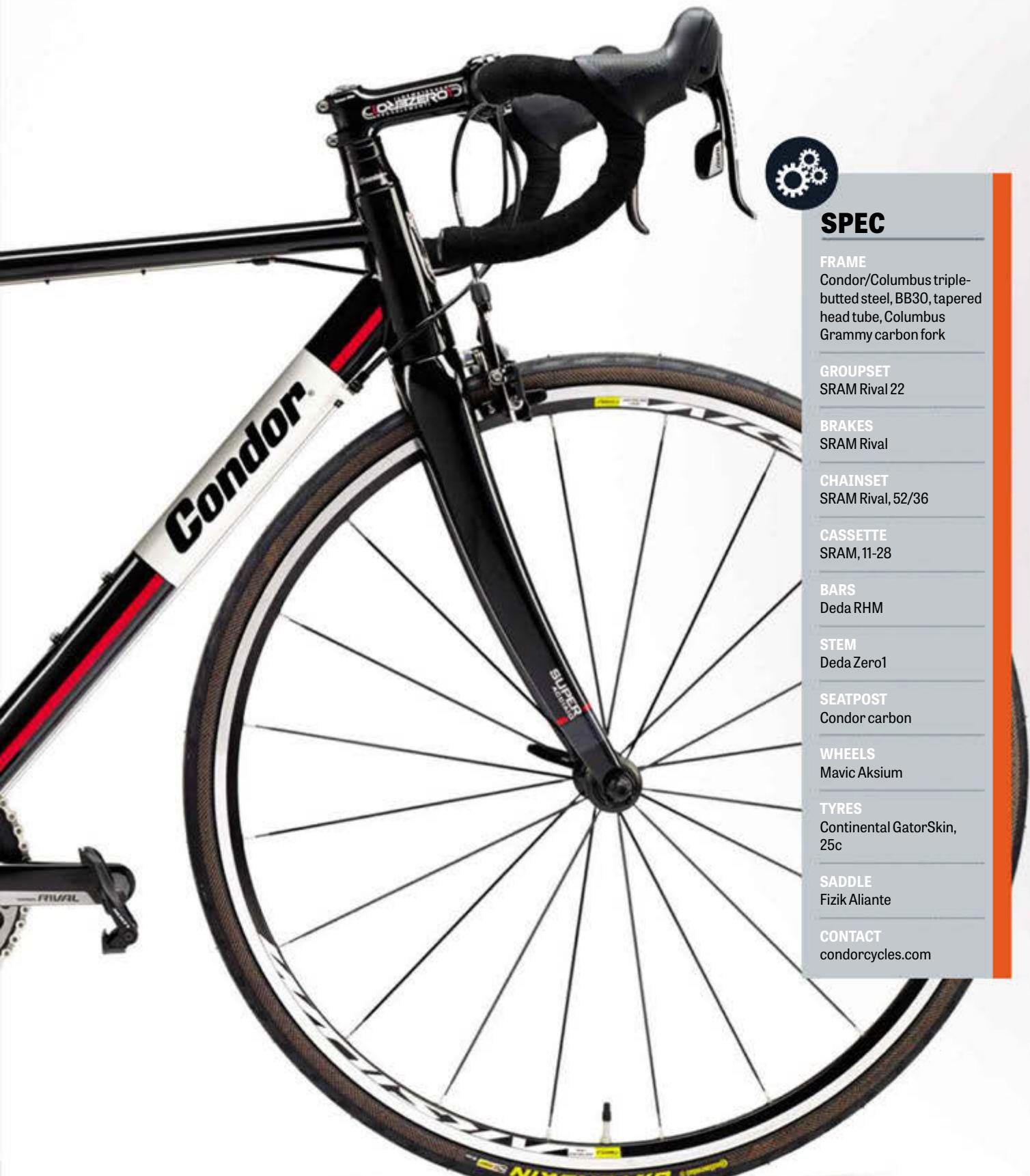


GEOMETRY

	Claimed	Measured	Head tube (HT)	135mm	135mm
Top tube (TT)	537mm	533mm	Head angle (HA)	72.0°	72.8°
Seat tube (ST)	520mm	525mm	Seat angle (SA)	74.0°	73.0°
Down tube (DT)		590mm	Wheelbase (WB)		969mm
Fork length (FL)		370mm	BB drop (BB)		73 mm

Size tested 52
Weight 8.74kg





SPEC

FRAME

Condor/Columbus triple-butted steel, BB30, tapered head tube, Columbus Grammy carbon fork

GROUPSET

SRAM Rival 22

BRAKES

SRAM Rival

CHAINSET

SRAM Rival, 52/36

CASSETTE

SRAM, 11-28

BARS

Deda RHM

STEM

Deda Zero1

SEATPOST

Condor carbon

WHEELS

Mavic Aksium

TYRES

Continental GatorSkin, 25c

SADDLE

Fizik Aliante

CONTACT

condorcycles.com

Frame

Steel has a reputation for comfort. The thing is, most people who tell you that haven't ridden a steel frame in 20 years – or, if they have, the bike they rode was 20 years old. Back then, models had narrow gauge tubing, a one-inch headset, quill stems, low-profile lightweight rims and undersized handlebars. No wonder they were comfortable. In the last two decades tube profiles have expanded,

head tubes have increased in diameter and become tapered, and the bottom bracket has stiffened. Condor has taken these innovations and applied them to custom triple-butted steel (strengthened internally at the joints without adding weight), creating a bike that is nothing like those of previous eras. The head tube is a sculpted tapered unit, a rarity in steel, and houses a tapered 1.5in to 1.125in carbon fork from Columbus. Likewise, the bottom

bracket is an oversized modern pressfit design – in this instance BB30. The bearings, which press directly into the frame, are cheap to replace but they need to be refreshed more often than those of most bottom brackets. A good thing about the design is the increased weld area for the down tube, which boosts stiffness. The model comes in 46, 49, 52, 55, 58 or 61cm, but as it comes with a bike fit, choosing the right size isn't an issue.



Attention to detail is excellent, right down to the taut, even taping and position of the hoods

Components

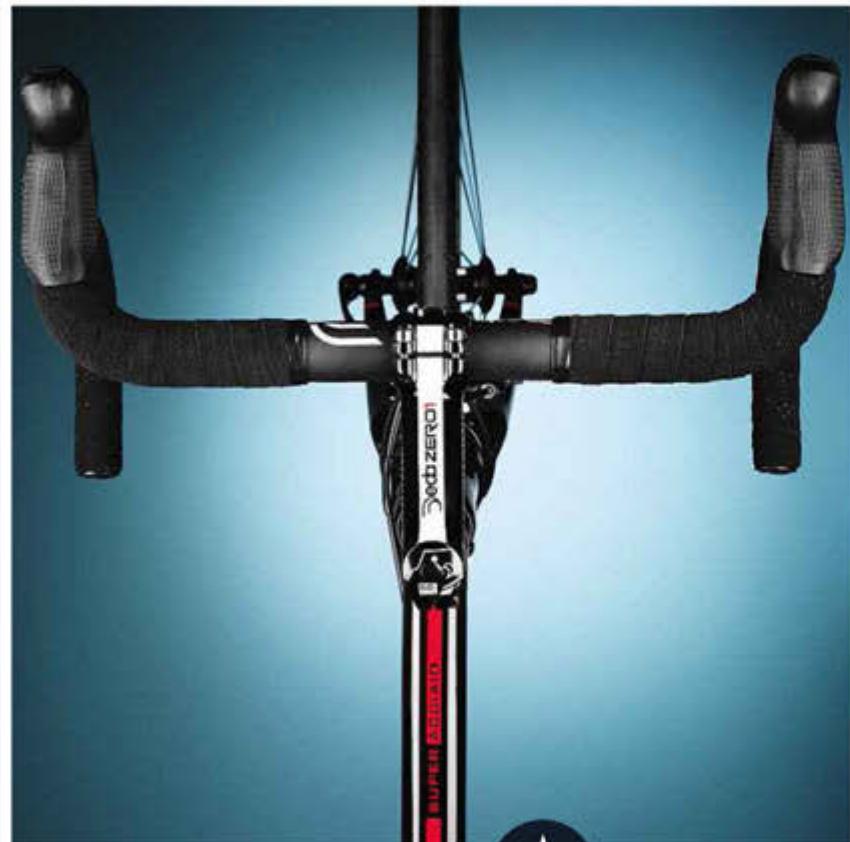
Given that the frame and fork cost £1,399, the budget for parts was somewhat restrained but, with an all-in cost of £2,150, we think we got a good build. Instead of Shimano's stalwart 105 groupset, we chose SRAM's third-tier 22-speed Rival – it looks great and once you're acquainted with the DoubleTap mechanism (push once to drop down the cassette; keep pushing to move it up), the shift is crisp and predictable. The alloy levers feel great and riding on the hoods is a real pleasure. Our bike was built with Deda bars and stem (both desirable aftermarket parts), Condor's own carbon post and one of our tester's favourite saddles, the Fizik Aliante. It's worth noting that, coming from a well-respected shop, the attention to detail in the Super Acciaio's build was a notch above what we'd normally expect. The way the bars were taped (pulled taut, evenly wrapped to the logos near the stem and finished with trimmed electrical tape) and the position of the hoods inspired confidence from the off, and allowed us to simply hop on and ride.

Wheels

This was where the constraints of our budget really took effect. Mavic Aksiums are by no means bad but, at 1,774g, they're neither light, wide or aero. They are however tough and reliable, so they're a good training choice. Aksiums would normally be supplied with Mavic's own Yksion Elite tyres, but Condor upgraded those to ultra reliable 25mm Continental GatorSkins. This isn't a wheelset we'd choose to race on but they're stiff, so when you sprint for a sign or launch an attack uphill, they respond quickly and efficiently. The tyres are grippy enough and, above all, resilient.

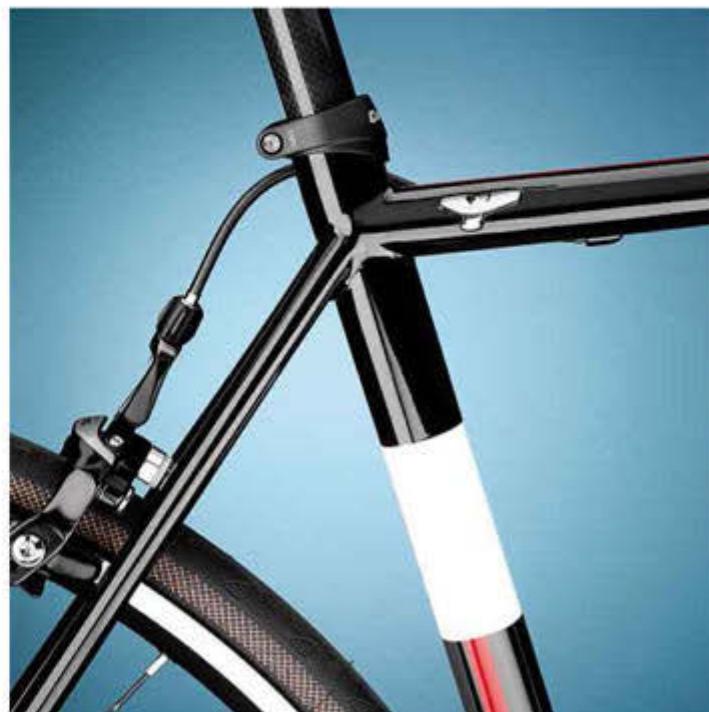
The ride

Forget everything you've ever read about steel; the Super Acciaio is different. First, let's talk about the weight: it's not light. In fact, Condor reckons the frame weighs 1,800g, 600g more than the aluminium bikes in this review. But, as we discovered in our Weighting Game feature in issue two, where we rode hill repeats with 3kg added to our bottles, weight on the frame is hard to notice on the road. What is evident on the road is just how stiff Condor has made this bike. It lunges like a caged lion at the mere



The sculpted steel head tube is a rarity – even among small-scale artisan frame builders

At 1,800g the frame's got heft – but that's offset by a pleasingly stiff ride



RATING

FRAME

Stiff, nicely sculpted and you don't notice the heft

COMPONENTS

An impressive groupset and comfortable saddle

WHEELS

Weighty but resilient and responsive to sprints

THE RIDE

Surprisingly easy, fast and copes well on corners

OVERALL

8.5
10

This bike lunges forward like a caged lion at the mere sniff of acceleration



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Canyon Ultimate AL SLX 9.0 SL £1,799

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A race-endurance hybrid that's set for mass appeal

About the bike

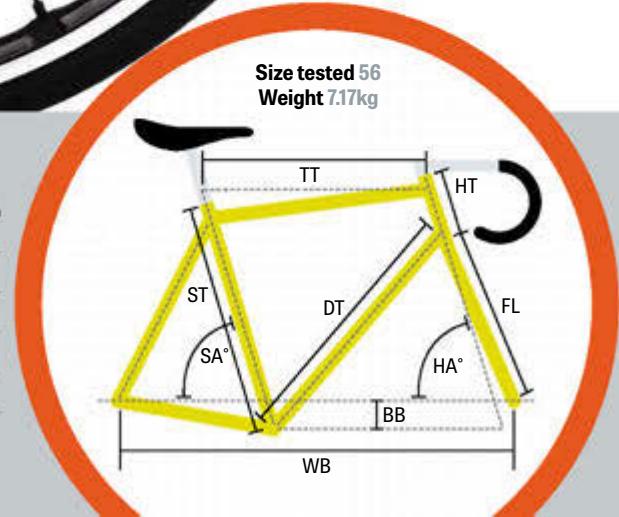
The first thing we noticed when we took Canyon's Ultimate AL SLX out of its box (which, although you're charged for it, is excellent and worth keeping hold of for overseas trips) is its weight – or lack of. This thing is as light as a feather and prompted us to immediately reach for the scales. It weighed in at 7.17kg without pedals. Impressive, but how does that translate to riding? Will its light weight mean sacrifices elsewhere? Let's find out.



GEOMETRY

	Claimed	Measured	Head tube (HT)	150mm	150mm
Top tube (TT)	549mm	548mm	Head angle (HA)	72.75°	72°
Seat tube (ST)	545mm	549mm	Seat angle (SA)	73.5°	73.5°
Down tube (DT)		568mm	Wheelbase (WB)	983mm	987mm
Fork length (FL)		376mm	BB drop (BB)		74mm

Size tested 56
Weight 7.17kg





SPEC

FRAME	Canyon Ultimate AL SLX, 1.25-1.5in tapered carbon fork
GROUPSET	SRAM Force 22
CHAINSET	SRAM Force, 52/36
BRAKES	SRAM Force
CASSETTE	SRAM, 11-28
BARS	Canyon H28
STEM	Canyon V13
SEATPOST	Canyon S13 VCLS
SADDLE	Fizik Antares
WHEELS	Mavic Ksyrium SLS WTS
TYRES	Mavic Yksion Pro
CONTACT	canyon.com

Frame

The Ultimate AL SLX frame is reportedly 110g lighter than its predecessor, the Ultimate AL, at a claimed 1,220g for size 56 (medium). It has a pressfit bottom bracket like the other aluminium bikes on test, and a tapered head tube from 1.5in to 1.25in. It's stiff and lightweight, but it's not a common set-up so finding a replacement stem or headset may be tricky. The head tube is also the tallest on test – only by 10mm,

but owing to the Acros headset (which loads the bearings by expanding below the stem, unlike a traditional bung that preloads from above) another 16mm is unavoidably added to the stack height. We can't help wishing the head tube was a centimetre shorter so that racers could adopt a properly aggressive position. The cables are routed internally and should be easy to replace thanks to some well thought-out engineering solutions,

including a removable plate on the top tube and gear cables that exit the down tube through a gap on its underside. Canyon refers to its geometry as 'Sports Pro' – the same set-up Movistar's Nairo Quintana uses on the Giro-winning Ultimate CF SLX. Having ridden the new Aeroad CF last month, which features Canyon's longer, lower, comfortable Pro geometry, we'd love to see Canyon switch to that set-up for all its performance bikes. ☺



Our rider needed more reach, so we'd advise experimenting with stem sizes for the perfect fit

Components

It's hard to find fault with SRAM's Force 22 groupset, so we won't try. Instead, we'll highlight the fact that Canyon allows riders to choose the cassette they would like to ride. So while our demo bike came with an 11-28 spread, you can swap that for 11-26 or 11-25 at the checkout. If racing is your goal, that's a good idea; for big rides in the hills, we'd stick with the 11-28. Other options offered at checkout are the seatpost and saddle. You can swap the standard 25mm seatpost for one with more or less layback, and the Fizik Antares saddle can be replaced with the women-specific Fizik Arione Donna. Very few manufacturers make 1.25in stems so Canyon makes its own, and our medium size bike came with a 100mm extension. Our 176-178cm testers felt that they'd swap this for a 110mm version. Canyon sells shorter and longer stems in its online accessories store.

Wheels

Mavic's Ksyrium SLS WTS wheelset has a retail price of £790 in the UK, so finding them on a bike at this price is unusual to say the least. At a claimed 1,395g they're as light as any aluminium wheelset out there. And they're stiff. Boy, are they stiff. In fact, despite the 25mm tyres, they're a little harsh. We put this partly down to the narrow rims (the tyres inflate narrower than those on, say, the Cannondale, which has wider rims) and the stiff radial spoking. Mavic would argue that light weight is the aim here, and while that's no doubt welcome, we'd trade 100g for some additional comfort. Really, though, these wheels are the kind of thing most people would dream of upgrading to. Even the 25mm Yksion Pro tyres performed adequately during the testing period. At 210g, they probably won't last long but they're grippy and didn't cut up badly on gritty winter roads.

The ride

Going by the numbers, the Ultimate AL SLX isn't remarkably different from any of the bikes in this review – in fact, it's very close to the Kinesis or the Cannondale. Yet it took much longer than either of those to get comfortable, requiring a couple of stops on the first ride to shuffle the saddle on its rails. Eventually we settled with it right back towards its maximum extension line. We were looking for more reach



and with the stem length set, moving the seat back is the only option. For us, a swap to a longer stem would be ideal; for you it might be the opposite, so experiment. On the roads of Essex and Hertfordshire, it began to really impress. You'll be unsurprised to hear a bike this light and stiff accelerates very well. That said, it's not hugely comfortable – wider rims would make a big difference, allowing you to run a slightly lower pressure. The frame is as good as anything here, the groupset works brilliantly and the finishing kit is excellent, but we'd advise budgeting £100 on getting the fit right. The Ultimate AL SLX is funny: it rides like a race bike but fits like an endurance bike. We know it will have mass appeal, but given that Canyon now makes the Endurance AL, we'd love to see this one be less 'all things to all men' and adopt Canyon's racy Pro geometry. Then we'd have a true champ on our hands. ⚡



A removable top tube panel allows for easy rear brake-cable replacement



The SRAM Force 22 is faultless and comes with our favourite 52/36 chainset



RATING

FRAME

Lightweight with clever engineering solutions

COMPONENTS

Excellent groupset, may need another stem size

WHEELS

Far above the quality we'd expect at this price point

THE RIDE

Stiff, accelerates well, took time to get comfortable

OVERALL



These wheels are the kind of thing most people would dream of upgrading to



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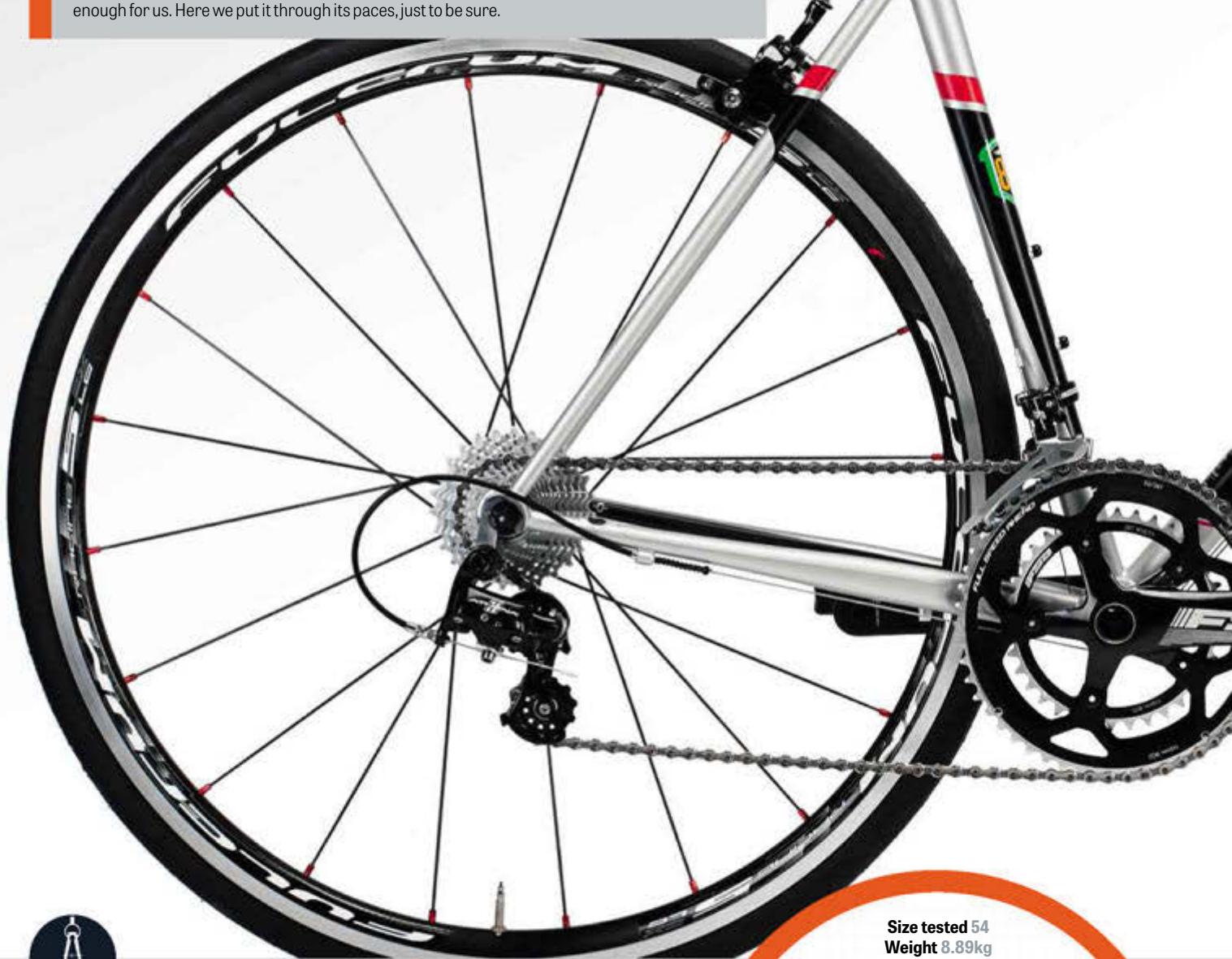


Genesis Volare 40 £2,000

A heavy-metal outfit with some big hits under its belt

About the bike

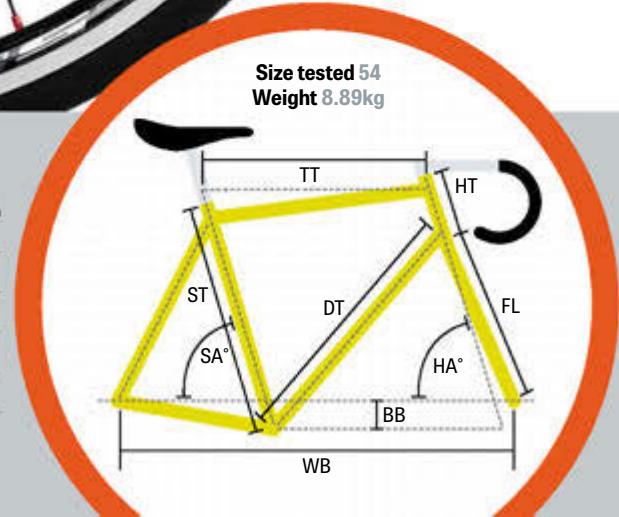
Genesis launched the stainless steel version of its Volare to much fanfare at the end of 2012. This was to be the bike the Madison Genesis team rode throughout 2013 and much of 2014, and they did so with aplomb, notching up some big wins. So our thinking is thus: if a bike made of steel is good enough to compete at the very highest level of UK racing, it should be good enough for us. Here we put it through its paces, just to be sure.



GEOMETRY

	Claimed	Measured	Head tube (HT)	135mm	134mm
Top tube (TT)	549mm	542mm	Head angle (HA)	73.0°	72.7°
Seat tube (ST)	510mm	511mm	Seat angle (SA)	73.5°	73.5°
Down tube (DT)		596mm	Wheelbase (WB)	980mm	979mm
Fork length (FL)		371mm	BB drop (BB)	72mm	74mm

Size tested 54
Weight 8.89kg





SPEC

FRAME:
Reynolds 853 Seamless,
44mm head tube, BB86,
ADK tapered carbon fork

GROUPSET:
Campagnolo Athena

BRAKES:
Campagnolo dual pivot

CHAINSET:
FSA Gossamer Pro
MegaExo, 52/36

CASSETTE:
Campagnolo Chrous, 12-27

BARS:
Genesis Road Compact

STEM:
Genesis Road

SEATPOST:
Genesis

WHEELS:
Fulcrum Racing 5 LG CX

TYRES:
Continental Grand Sport
Race, 25c

SADDLE:
Genesis Road

CONTACT:
genesisbikes.co.uk

Frame

Genesis makes the Volare in a range of steels, all from Reynolds. The Volare Team – as ridden by the Madison-Genesis team last year (they've since added a carbon fibre option) – is made of Reynolds 931 stainless steel, while this Volare 40, the second bike in the range, is made from Reynolds' top-spec 853 non-stainless material. It's a cutting-edge material in its own right – lightweight and

air-hardened for increased weld strength – and here it's had all the bells and whistles added to bring it into the modern era, with a pressfit BB86 bottom bracket shell and a 44mm non-tapered head tube that allows the use of a tapered fork. This style of head tube uses an external headset cup at the bottom, where the steerer tube is 1.5in, and a dropped-in cup at the top where the steerer tube is only 1.125in. It's simple and light, and provides a

larger welding area to boost steering stiffness. The fork is carbon and comes from Taiwanese brand ADK. It's a handsome and stiff unit. The frame and fork are available separately for £899, the frame weighing a reported 2.1kg, the fork 360g. The tubing isn't as oversized as the other bikes here, casting a more 'classic' silhouette. The narrower profiles no doubt help in making the bike noticeably compliant and comfortable over rough roads.



It's not often you see a mass-market bike kitted out with a Campagnolo groupset, and the Volare shows why that's a shame

Components

It's remarkable that we don't feature bikes with Campagnolo components more often. While the Italian manufacturer does well in the pro peloton and among riders building their own bikes, the dominance of Asian giants Shimano and SRAM keeps its presence in the mass market to a minimum. Which is a shame, as the 22-speed Athena groupset used on the Volare is really good. The shifters have a light action and the hoods are a great shape, while the dual-pivot brakes work very well. Having got used to Shimano and SRAM shifters, both of which use levers that flare out slightly from the bars for easier braking from the hoods, the Campag levers do require acclimatisation, sitting marginally further inboard. It's a shame that Genesis has specced an FSA chainset rather than the more classically styled Athena, but performance isn't in question, only aesthetics. We were unimpressed by the rudimentary Genesis-branded saddle and seatpost, though. Spending this much, we'd hope for something more sophisticated.

Wheels

Fulcrum is a sub-brand of Campagnolo, making wheels for both Shimano- and Campag-equipped bikes (Campagnolo uses a different freehub from that shared by Shimano and SRAM). The Racing 5 LG CX wheels specced on the Volare are truly excellent. The internal width of the rim has been increased to 17mm, giving the tyres a stable platform and more volume, and at 1,654g for the pair, they're fairly light too. The 'CX' suffix distinguishes this version as having more sealing than standard, which is always welcome. The tyres are Continental Grand Sport Race in 25mm: fast-rolling, grippy and comfortable. The only downside is that they cut up easily – we scored our first flat after only 35km of riding.

The ride

As the heaviest bike here we had our reservations about how the Volare would ride. They were unfounded. The light wheels and racy but comfortable fit meant we were quickly up to speed and happy to attack short climbs. What immediately struck us was that the Volare is distinctly less harsh than the other bikes here – you'd happily ride it all day. For a bike with a racing pedigree, we felt the head tube



could be a little shorter; while it's comparable to the other bikes in this review, the external bottom cup means the front end is higher. The handling, though, is excellent – the stout front end, reliable brakes, stiff wheels and voluminous, grippy tyres combine to encourage the rider to test the limits on corners. In the same way that the Kinesis Aithein is more comfortable than the Caa10, the Volare has a similar relationship with the Condor Super Acciaio. On paper they're directly comparable; on the road they have very different personas, the Volare conforming much more to the stereotype of the smooth steel ride. It's nice to feature a bike with Campagnolo, but we can't help but think Genesis could afford a more premium finishing kit at this price point. The Volare may not be a lightweight but that doesn't slow it down – it's fast and comfortable, and steel's magical properties are here in spades. 



If you're used to the positioning of Shimano and SRAM levers, these take some adjusting to

We've got no gripes over the FSA chainset's performance



RATING

FRAME

 Heavy, but narrow profiles offer compliance

COMPONENTS

 Good groupset, let down by cheap saddle and seatpost

WHEELS

 Excellent: lightweight, roll speedily and grip well

THE RIDE

 Comfortable, accelerates well, impressive handling

OVERALL



The Volare is distinctly less harsh than the other bikes – you could ride it all day

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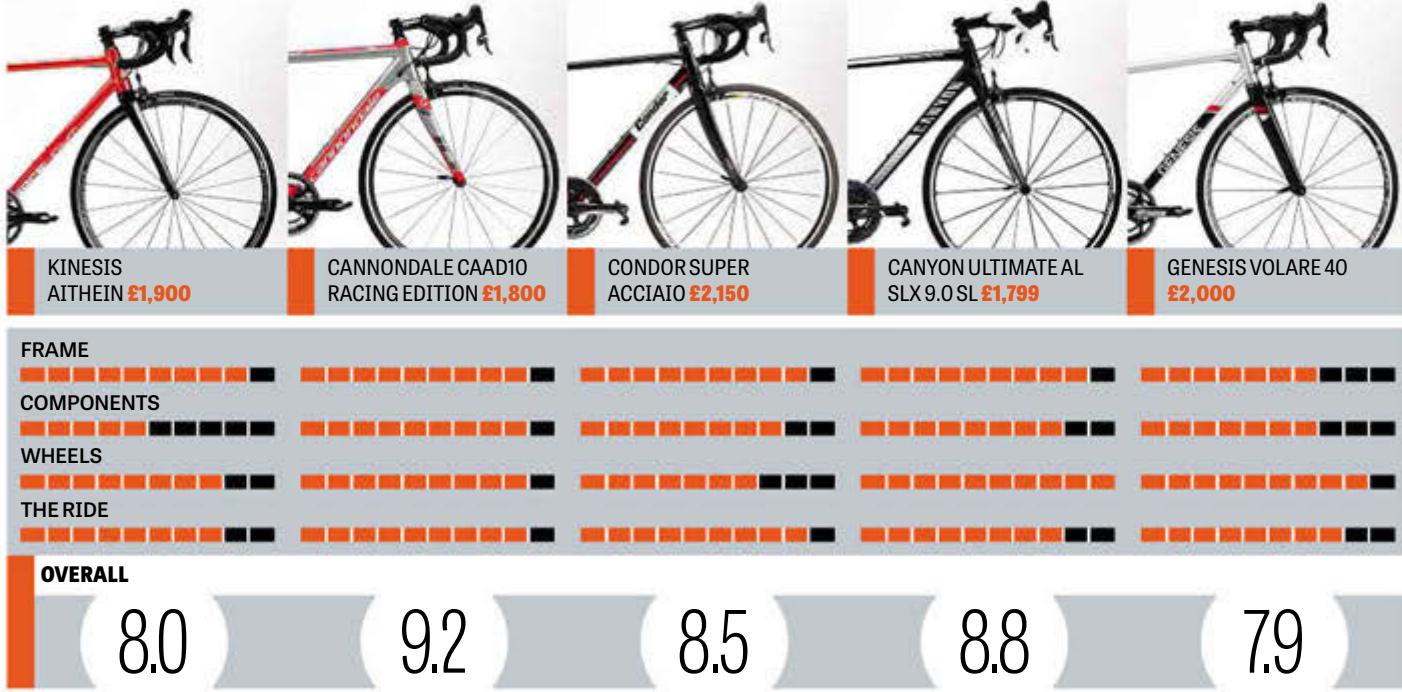
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Cannondale Caad10

It's difficult to pick a winner from five bikes that all have a lot to recommend them, but the extremely capable American racing thoroughbred takes the prize by a whisker



HOW THEY STACK UP...



Well, what a test that was. These have been some of the most enjoyable, surprising and exciting bikes we've tested at *BikesEtc*, and doubly surprisingly, they're not all top-of-the-range machines that are out of the reach of normal people. These are just great bikes at a fair price that combine the best of legacy materials with the best of modern technology. What's more, there really are no losers here – they're all great bikes in their own right, and pretty much whatever you hope to achieve on a road bike this year, there's a model here that will help you to get there.

First up, let's start with the Genesis Volare and the Kinesis Aithein. Despite the fact that one's steel and the other's aluminium, they share similarities in the way they ride – which is to say, they're both surprisingly comfortable. We'd happily spend all day riding on either.

The Condor Super Acciaio is an absolute blast to ride. It has the most expensive frame though that partly reflects the fact that there's a bike fit included in the price. But get out on the road and you forget all that – this thing is a rocket ship, urging you to sprint like a lunatic at every opportunity. It's actually a bit exhausting, even if it is ludicrously good fun.

Our top two bikes are both aluminium and come from big manufacturers with huge buying power. If the Canyon Ultimate AL SLX's geometry works for you, it's an absolute steal. For us, looking for a race bike, we'd prefer a lower, longer stance, the same as Canyon uses on its Aeroad CF SLX, as tested in our last issue.

That leaves us with the Cannondale Caad10. Where to start? It's lightweight, it's insanely stiff, it corners like it's on rails and it was born for out-of-the-saddle sprinting. But if you're in the saddle, the outlook's still good: the position is aggressive without being uncomfortable. If you can't win on this one, you really can't blame the machine. As amateur race bikes go, it ticks all the boxes. ☺

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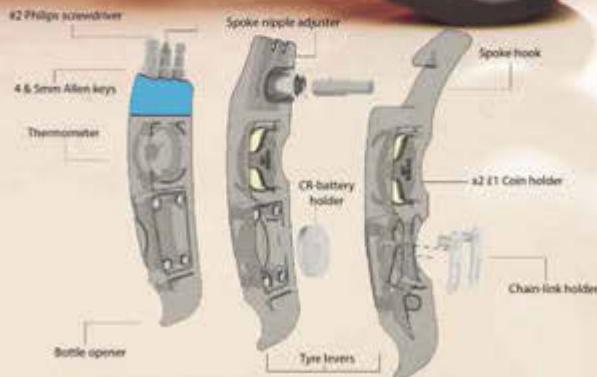
"...the Multilever is both light and pretty much indestructable"

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Clever Casual

Jackets nice enough to wear once you've reached your destination



It's been a long time since cycling meant being condemned to a sartorial netherworld of garish patterns and ugly technical fabrics. Plenty of companies now make cycling jackets that are nice enough to wear away from the bike. Whether you're commuting or racing, these eight jackets will keep you looking good but is their performance equally on point?



**Rapha Classic Softshell Jacket****£240** (also available cut for women)

A few years ago, you could hardly walk into a bar in London without spotting someone wearing a Rapha Softshell twinned with a pair of jeans. Whether or not you think that's an acceptable outfit to wear on a night out or that it's acceptable to spend £240 on a cycling jacket are questions of personal temperament. However, it's undeniable that this jacket, with its asymmetrical zip and shoulder panel, created a stylistic trend that's still going strong. Luckily, a racy cut, excellent water resistance and breathability that's aided by the addition of pit zips means this jacket isn't just for posing. While it's not as tight as Rapha's new Pro Team Softshell, the cut is still on the racier side – something that along with the high, fleece-lined collar helps any layers underneath retain warmth. A stowable bum flap includes a large reflective logo and can be deployed to add visibility. Otherwise, subtle reflective piping helps alert drivers to your presence without spoiling the jacket's looks. A softshell is a must for every rider's wardrobe and while it's possible to find technically similar jackets for less, few look as good.

rapha.cc**Rating**

STYLE

FUNCTION

VALUE

OVERALL
9
10**Swrve Deck Jacket****£115**

Weaving through London traffic on a Brompton during our daily commute, the Swrve jacket both looks the part and performs well. Although cut for cycling (long at the back and with slightly longer sleeves), it isn't obviously a cycling garment and we'd happily wear it off the bike. On the bike, it benefits from plenty of technical features. Made from a comfortable softshell fabric with a fleece lining, it has a sturdy zip plus a button-down flap to enhance windproofing. The collar can be turned up and buttoned to give extra protection around your neck, and the sleeves have elasticated inner cuffs to keep draughts out. Although we avoided heavy showers during testing, it did keep us dry in light rain, and we had no worries about overheating however hard we rode, thanks to the generous zip-up vents under the arms. The two front pockets are more ornamental than useful, but there's a handy interior phone pocket and a capacious rear zipped pocket for your essentials.

swrve.co.uk**Rating**

STYLE

FUNCTION

VALUE

OVERALL
8
10



OVERALL
9
10

Café du Cycliste Geraldine City Jacket

£215

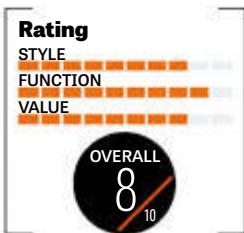
Like oil and water, bicycles and leather jackets just don't mix, yet Café du Cycliste's Geraldine City Jacket pulls off the look of a traditional biker jacket without being either a) leather or b) naff. Its multitude of cycling-specific features include hidden ribbed cuffs to keep out the cold, a longer cut at the back and longer sleeves. The mesh lining and rear vents can deal with heat and resultant moisture up to a point, after which the two-way zip - offset so it doesn't dig into your neck - takes over temperature-control duties. The treated cotton fabric is water-resistant - light showers bead nicely and don't soak through - and the inner chest pocket and three zipped side pockets are plenty for a trip to the pub. It looks pretty classy off the bike as well - in fact, once you've stashed away the reflective panel in the rear pocket it could pass for a stylish casual jacket for a gentleman of a certain age - one that doesn't scream 'mid-life crisis'. cafeducycliste.com



Endura Urban Softshell Jacket

£100

With its permanently affixed hood, Endura's Softshell jacket is aimed at the urban commute market - not surprising given its name. Composed of stretchy, waterproof and quick-drying fabric, it does without vents, meaning prolonged high-intensity riding can be a sweaty affair; although to be fair, that's not its intended use. Far happier on shorter commutes, the fleece-lined fabric is comfortable and provides a good degree of warmth. Endura is no newbie to making cycling clothing, which shows in the cut and articulation of the jacket, particularly in features like the pre-curved arms. The casual but not baggy cut means there's little excess to flap around, even in the hood, which features a draw cord and rigid peak to help keep you snug. A large, waterproof zippable rear pocket is handy for stashing your portables, while the two front pockets are good for warming your hands. The chest pocket is ideal for a phone or wallet and features a headphone port. Unashamedly designed for the city, nevertheless the Urban Softshell doesn't scrimp on cycling specific features. endurasport.com



OVERALL
8
10





Vulpine Waterproof Gill Jacket

£229 (also available cut for women)

Lack of a hood seriously limits the versatility of many cycling jackets. Not only a necessity if you're hiking, they're also indispensable for touring or simply any time you're caught in the rain while off the bike. Obviously no roadie wants a giant windsock trailing behind them but when it's so simple to make a hood removable, as on the Gill, it seems crazy that more companies don't include one. A relaxed yet still very much cycling-specific cut makes it easy to add layers underneath, while a relatively long front appears normal off the bike without being obtrusive while you're on it. Considering few racers wear waterproof shells because of their bulk and limited breathability, this approach will make sense for the majority of users. To combat the boil-in-the-bag effect, the Gill features six vents running down its sides, allowing moisture to escape far more readily than clever fabric technology alone could ever manage. Unlike pit zips, these vents are constantly open although careful positioning and design ensure water is unlikely to find its way in. Potentially the only waterproof most cyclists will ever need. vulpine.cc

Rating



Le Coq Sportif Montech Waterproof

£175

Le Coq Sportif is better known for sports fashion than as a purveyor of performance gear, but with its taped seams, thumb-loop cuffs and Napoleon pocket, the Montech jacket is clearly aimed at serious cyclists. The issue is the fit: the medium our average-sized tester tried is OK over a summer jersey, but anything thicker and it's tight around the shoulders and upper arms. As a casual jacket over a sweatshirt it's less than ideal, and as a performance jacket, where you're in a racier position, even less so. It might just work if you're pear-shaped. But it's well thought-out, with waterproof zips, reflective details, reasonable underarm vents and a silicone gripper on the tail to stop it riding up. If only it fitted. As it is, the Montech is a coq-a-doodle-don't from us. lecoqsportif.com





Giro Mechanic Waterproof Jacket

£200

Giro took its inspiration for the Mechanic Jacket from classic workwear. The blue collar is certainly present and correct and its rugged silhouette wouldn't look out of place walking out of a factory gate in Detroit, the Motor City. However, hiding behind the DWR (durable water repellent) cotton exterior is a breathable, waterproof fabric and fully taped seams. The fabric is pleasingly substantial off the bike but with no venting, it'll get sweaty. That's not the only problem. The jacket's tough styling makes no room for cycling ergonomics. Reach for the bars on anything but the most upright of bikes and the shortness of the sleeves and tail becomes obvious, exposing gaps at your wrists and the small of your back. On our large size, the shoulders were tight yet the front was long, causing the collar to jab you under the chin. While obviously not a racing jacket, riders on anything other than a Dutch bike will struggle with fit.

zyro.co.uk



Muxu Town Jacket

£120 (currently reduced to £70)

Is 'designed in Barcelona' a selling point for cycle clothing? Spanish brand Muxu seems to think so but we're not convinced. Style-wise, the lightweight Town Jacket sits towards the sporty end of the spectrum and is not something we'd reach for on a night out. Despite that, its only concession to a cycling cut is a longer sleeve length. The stretchy softshell fabric has a rough, cheap-feeling texture but it lives up to its water-resistant claims, the droplets beading and rolling off in light showers (it remains untested in heavy rain). Other features include Lycra sleeve linings to keep out draughts, zipped side vents, a rear fold-down reflective strip and reversible reflective wristbands (although these flap around in non-reflective mode). There are two front zipped hand pockets, a neat Velcro-flapped phone pouch and a zipped interior pocket with a cable port.

muxu.cc



DON'T SWEAT IT

There's more to staying dry than keeping out the rain

 When it comes to making outer garments for cycling, the holy grail is a perfect balance of being both waterproof and breathable. But while many jackets claim to achieve this feat, the truth is often sometimes far from it.

The problem is that any time your clothing creates a barrier to keep the weather out it's going to make it harder for moisture vapour to escape in the opposite direction. A rubber mac might be totally waterproof but it's also likely to get clammy as soon as your heart rate rises, as your sweat is trapped inside with nowhere to go. The most common solution to this problem is breathable fabrics: high tech materials with microscopic pores that are largely impermeable to liquid while allowing vapour to pass through. However, these wonder fabrics aren't without their problems.

Not only can they be expensive but the term 'breathable' itself is

something of a misnomer. Unlike your lungs, no fabric is able to pull moist air out of your clothing and replace it with comfortable dry air. Over the years marketing has left many consumers with unrealistic expectations about what breathable fabrics are capable of.

The more vigorous your efforts the more important breathability becomes. On a fairly sedate commute it's not so crucial. However, if you tend to ride more aggressively you'll need to shell out more for something with increased performance.

One low-tech solution that can boost the ability of your jacket to jettison moist air is venting. Gaps in the fabric and zips below the armpits can help regulate the climate inside, and are featured on most of the products tested here. This, combined with a decent fabric, means there's no reason your jacket shouldn't keep you comfortable from both inside and out.

GET SHORTY

You know spring is in the air when a cyclist's thoughts turn to putting away the cold-weather gear and breaking out the bibshorts. Here are the best you can get for around the 50 quid mark

For the 'just-get-on-and-pedal' brigade, the expensive price tag that comes with features such as flatlock seams, multi-density pads and fast-wicking fabric can seem as unnecessary as they are costly. However, there's a wide range of more attractively priced bibshorts available that claim to have some of the same characteristics as the higher-end alternatives. While cheaper prices inevitably mean a compromise somewhere along the line, can you still expect a decent standard in comfort, design and performance? We put eight pairs to the test to find out.

Vermarc Relax

£64

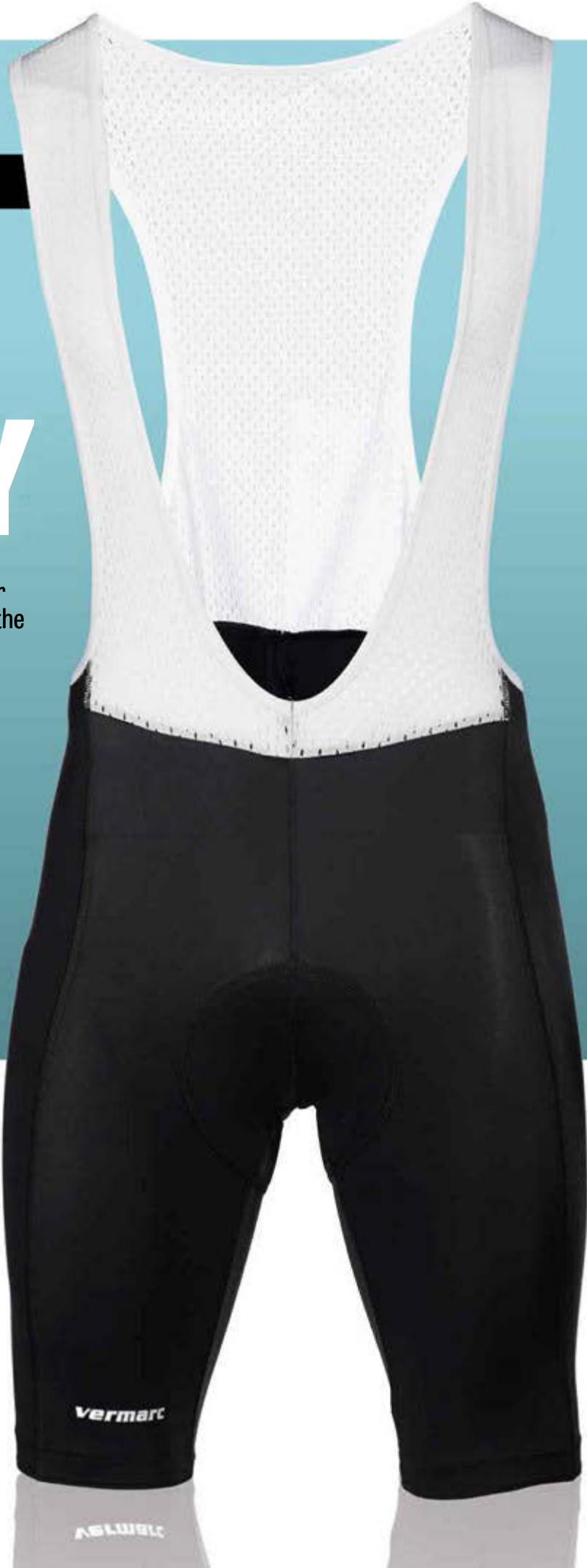
Set up in his garage by pro rider Frans Verbeeck 35 years ago and now run by his son Marc, Vermarc (geddit?) is a Belgian brand that supplies kit to World Tour teams including Etixx-Quick-Step. It's now manufactured in Italy, so the sizing can be on the snug side – once we'd squeezed into our size L, they didn't leave much to the imagination. The 'Power Lycra' fabric has a quality feel and look (as we'd expect of the most expensive shorts on test), though its claims of being windproof should be taken with a pinch of salt. The pad is one of the more comfortable we tested, and the shorts are quick-drying. The mesh braces are broad and incorporate a pocket for a phone or race radio on the rear panel.

chickencycles.co.uk

Rating

FIT
COMFORT
VALUE

OVERALL
8
10



**Madison Sportive**

£55

The name implies long-lasting comfort on a typical sportive, but our experience of these shorts suggests otherwise. Despite boasting a 'custom Madison 4G-Race' gel chamois, the multi-density pad is disappointing. After a couple of hours, we had to double-check that it was still there, such was the lack of support it offered. Elsewhere, the Italian Lycra – 'pre-curved into the riding position' – is a snug, comfortable fit, and the material honours its claims of being fast-drying. Soft mesh panels on the waist, hips and back are designed to prevent overheating, though there wasn't much danger of that happening during the Scottish February gales in which we tested them.

madison.co.uk**Specialized RBX Sport**

£45

It's a shame that a brand associated with some of the most cutting-edge technology in the pro peloton has apparently devoted so little time and effort to its entry-level clothing range. The minimalist design promises a less-is-more approach, but the rest of the garment doesn't live up to this, with sufficient flaws to stop these shorts from scoring high marks. The silicone grippers keep the hems in place but feel constricting after an hour on the bike, while the braces caused some nipple irritation even with a base layer on. The high back ensures a proper fit, but offers little in the way of ventilation or wicking. On the plus side, the pad is comfortable enough, and is a vivid lime green colour too, if that's your sort of thing.

specialized.com**Rating**

FIT									
COMFORT									
VALUE									

OVERALL
6 / 10**Lusso Aero 50**

£50

Despite the Italian-sounding name, Lusso is a Manchester-based company set up in 1982 by pro cyclist John Harrison and his wife, a Marks & Spencer lingerie designer. So far, so good. This is an excellent bit of kit – good-looking (broad white mesh braces with red trim), form-fitting (multi-panelled Italian 'Speed' Lycra) and performance-friendly (a 13mm multi-density pad rated for mid to long distance rides). True, the pad does look a bit 'sticky outy' off the bike, but it moulds itself between your backside and the saddle perfectly when on the move, while the high-cut back is very good at wicking away moisture.

raleigh.co.uk**Rating**

FIT									
COMFORT									
VALUE									

OVERALL
9 / 10

**Pearl Izumi Attack**

£60

These mid-length shorts are a great fit, and we experienced no problems with the multiple seams running down them. The high mesh back and broad mesh braces, plus effective silicone grippers and a decent 13mm-thick pad all contribute to a comfortable ride. There is just one weird performance issue, which we have not been able to account for despite detailed examination of the shorts and close reading of the label's list of materials: the crotch panel material is very shiny and we increasingly found ourselves sliding backwards on the saddle. Admittedly, it may have been a perfect storm created by our cheap seat's smooth surface and the particularly greasy chamois cream we had applied, but it didn't happen with any of the other shorts reviewed here.

madison.co.uk

Rating

COMFORT
STIFFNESS
WEIGHT

OVERALL
7
10

Nalini Cicos 3

£44

Nalini is as Italian as cappuccino and Ferrari, and as intimately associated with the history and heritage of professional cycling as Coppi and Pantani. Just pulling on these shorts made us feel like a *campionissimo*, even if the Italian sizing – very close-fitting – is more Pavarotti than Cipollini. In reality, the pad is a no-nonsense piece of micro-fibre perforated chamois, and not quite as comfortable on a two-hour ride as the multi-density versions also tested. Elsewhere, the shorts feature lightweight rubberised grippers that feel slightly more abrasive than the silicone ones on other shorts. On the plus side, the mesh panelling extends all the way around from a high back panel to a high-cut bib at the front, which reinforces the impression of cutting a Nibali-esque profile. In our imagination, anyway.

chickencycles.co.uk

Rating

FIT

COMFORT

VALUE

OVERALL
6
10

**TO BIB OR NOT TO BIB?**

They may not be the height of fashion but there are strong arguments for wearing bibs

In the days when riders rattled around in knitted woollen shorts or plus fours, braces were necessary to keep garments from falling down. But why do modern riders still prefer bibs to flat-waisted shorts? Part of the reason is that not only do the straps keep your shorts in place and prevent a builder's bum, they also do away with the need for tight elasticated waistbands, which can be uncomfortable. They'll also keep the chamois pad exactly where it should be, helping to prevent chafing, and are perfect for pretending to be a pro wrestler when no one's looking. The only real downside is the difficulty of having your shorts attached to your shoulders when nature calls.



Illustration: Ben Spurrier



Endura Xtract Gel

£45

Scottish company Endura's reputation has grown from that of a manufacturer of wet-weather mountain bike gear to supplier of high-tech kit to one of the world's best pro road cycling teams (Movistar). While the pads in some of its high-end bibshorts can now be custom-moulded to fit the contours of your body, how do its off-the-peg shorts at the other end of the spectrum fare? Well, we're happy to report that they perform well – the 400-series pad may be mass-produced but it's comfortable and boasts 'micro-wick technology' to channel moisture away from the skin – but our only issue is with Endura's sizing, which is on the generous side. Our tester is normally an L, but here the M fitted him perfectly, so it would be wise to try before you buy.

endurasport.com

Rating

COMFORT

STIFFNESS

WEIGHT

OVERALL

8
10



BikesEtc

BEST
IN TEST



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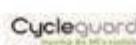
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HEADS OF THE CLASS

Is it worth paying more than £100 for a helmet?
We test 11 mid-range models to find out

► Helmets might not always seem a fun purchase but they can have a big impact on your cycling experience. Whether they cost £20 or £200, all helmets have to meet the same safety standards, but they'll only do the job they're designed for if they fit properly. Everyone's head shape is different so it's important to try on a few different ones and see which fits you best – something that seems mildly irritating when trying a helmet on in the shop can become unbearable

when clamped to your perspiring cranium for mile after mile. To fit our tester properly, nine of the ten we tested were a medium but one was a small, so it can't be taken for granted.

Aside from fit, weight and ventilation are prime considerations, and for some riders, aerodynamics is important too. It's possible to spend hundreds on a top of the range model, but we were keen to see if you can expect good performance for under £100. Read on to find out what we discovered...

**Met Estro****£90**

Weight: 278g (size M)

Our tester was initially delighted with the Estro, its longer shape making it a good fit for his long and narrow-shaped head even before making any adjustments, although he went on to complain that the chinstrap, though well made, trapped his beard. This may not be a problem for less hirsute readers. Inside, the padding is excellent while the ratchet mechanism is firm and positive and also allows height to be adjusted. Plentiful vents in different shapes, size and angles work well at channelling air past the head, helping to keep you cool. From the side, the helmet presents quite a large surface area with all the fins at the back which means you may find your head being buffeted around by the wind on blustery days.

met-helmets.com**Rating**

OVERALL
9
10

Scott ARX MIPS**£75**

Weight: 259g (size M)

What makes the ARX interesting is the adoption of MIPS (Multi Direction Impact Protection System) technology, which also features on the Giro Savant (opposite). In case you need a reminder, MIPS is a low-friction liner that allows the head to rotate inside the helmet in the event of an impact – Scott tells *BikesEtc* that tests have shown it can reduce rotational violence (the major cause of brain injury) by up to 34%. Safety features aside, the rest of the helmet is much more traditional with a good quality ratchet wheel, although it's not adjustable for height. The venting is average and we found it got a little warm inside. In summer, it could become quite uncomfortable, especially with the extra sheet of plastic in there from the MIPS.

scott.com**Rating**

OVERALL
8
10

**Uvex Ultrasonic Race****£80**

Weight: 225g (size M)

The headline for the Uvex is just how light it is – but it's not just about weight: with that smooth, rounded shape and lack of vents, we'd wager it's pretty aero too, although it does get quite warm. The internal adjustment wheel is easily operated with gloves on, and is adjustable for height too. Other nice features include a fly screen at the front to keep bugs out and a buckle so you don't have to adjust all the straps if you take a cap off mid-ride. There's also a protective piece of foam for your chin but the ear adjustment buckles are ridiculously stiff and the padding inside is a let down: not very dense and thinly spaced so the plastic of the shell touches the forehead, which we found uncomfortable. Ultimately, it didn't suit the shape of our tester's head so we'd recommend giving this one a good try before buying.

raleigh.co.uk**Rating**

OVERALL
7
10

**Giro Savant MIPS****£90**

Weight: 261g (size M)

Despite its mid-range pricing, the Savant is Giro's first model to feature MIPS, which also appears on Scott's ARX (opposite). This claims to improve on existing helmet technology by allowing the head to move independently of the helmet in an impact, thereby reducing injury. With the helmet on, you don't notice it: it doesn't interfere with ventilation and adds negligible weight. The helmet is secured with Giro's Roc Loc retention system, and overall mass along with cooling is good. Giro's interpretation of the average head shape is wider towards the front than some brands and the helmet sits fairly low on the head. If there's one area in which the Savant loses points it's the bulky styling, although this is more noticeable in the mirror than on the road.

zyro.co.uk**Rating****Endura Airshell****£90**

Weight: 259g (size M)

Words or pictures cannot do justice to just how bright a green this helmet is. The finish is excellent with nice touches such as colour matched straps and carbon reinforcement on the shell (well, on the bits that aren't lairy green). Internally, the helmet is generously padded and the ratchet is adjustable for height, although the mechanism feels cheap and a bit vague. It took us a few goes to get the tightness just right. There's no questioning the amount of venting either and during a ride on one of the sunnier days so far this year, it kept our tester's head nice and cool. The only disappointment was that the padding on the retention strap peeled away after relatively little use, which is not what we'd expect of one of the more expensive models on test.

endurasport.com**Rating****Catlike Vacuum****£80**

Weight: 255g (size S)

The shape and design of the Catlike is unique: instead of lots of small vents, the Vacuum has four large 'gills' on either side that open up a huge amount of area to allow for good airflow. Catlike has managed this by moulding the helmet around an internal bar that gives extra support to the polystyrene shell. The padding inside is ample and the straps are a good quality and easy to adjust around the ears. Although there is no proper height adjustment on the ratchet strap, it's quite dainty so it can move around and accommodate most head shapes quite easily. While riding, the helmet remained cool and comfortable to the point where our tester almost forgot it was there. It's worth noting that Catlike helmets only have a 2cm range so take extra care when choosing your size.

i-ride.co.uk**Rating**



Specialized Propero II

£70

Weight: 240g (size M)

First impressions of this helmet were really good. The quality of the finish is excellent, considering it's one of the cheaper models on test, with matching coloured straps and matt paint on the exterior. The internal fittings are adjustable for height in four steps; you have to pull the padding out to adjust it, which is a faff, although you should only have to do this once. The internal adjustment has a quality ratchet with very small steps to ensure a good fit. The venting is excellent, with an extra cut out on the brow that helps prevent a build up of sweat above the eyes. The internal shape is thin and long which suited our tester's head perfectly. An impressively well thought-out piece of kit.

specialized.com



Rating



OVERALL
9
10

Mavic Espoir

£65

Weight: 275g (size M)

One of the cheaper helmets on test, the Espoir's cost-cutting measures are evident at first glance. The shell is a basic round shape with not a huge amount of venting and the finish isn't great. Along with chunky aesthetics it's also the heaviest on test. The ratchet wheel has quite large steps and isn't adjustable for height. This combined with basic straps meant the helmet was never really a great fit for our tester. In use, it soon starts to feel hot and stuffy due to the ineffective venting, which doesn't start until for a couple of cm up the brow, and leaves the rider itchy and uncomfortable. Overall, a somewhat disappointing helmet, especially considering how composed some other brands' budget offerings are.

mavic.co.uk



Rating



OVERALL
5
10



Lazer Blade

£60

Weight: 235g (size M)

Picking this up for the first time, we were surprised by how light it was. We imagined Lazer's unique internal retention system would make the helmet heavier but evidently we were wrong. The retention system is unique because the adjuster sits on the top of the helmet. Rotating it pulls an internal wire tighter, which allows for a firm hold with even pressure. By moving the mechanism up top, it also allows ample room at the back if you have long hair – Lazer points out that this makes it 'ponytail friendly'. The internal wire is easily adjustable for height and the side straps are well placed and easy to adjust too. When riding, the big central vent at the front keeps the bulk of the head cool though we did find the sides of the head got a little hot. Even so, considering the price it's a great choice.

madison.co.uk



Rating



OVERALL
9
10



FIT FOR PURPOSE

Wear your lid properly or it won't be able to do its job when needed

» A bicycle helmet is basically a polystyrene shell moulded into roughly the shape of your head. In an impact, the polystyrene cracks and compresses and decelerates your head, so your brain doesn't thump the inside of your skull. It can only do this once though, as it doesn't spring back, so after any big impact a helmet must be replaced. If you have a minor bump, you can check your helmet by putting it between your palms, with the inside of the helmet facing up, giving it a gentle squeeze. If you see any obvious cracks, or signs of deflection where there are marks, chuck it in the bin. Over time, UV light and the oils from your hair and skin attack the polystyrene, making it brittle, so helmets should be replaced every three years.

As a guide, a helmet shouldn't be so tight that it puts pressure on the forehead, as this will cause headaches when worn for prolonged periods. Once the helmet is on, tighten the internal straps so that if you lean forwards it doesn't fall off, then check for excessive side-to-side play. If you get that, you've got a long, narrow head and should look at another model. The chinstrap should be done up so that you can still fit two fingers underneath it comfortably, and should be adjusted to avoid catching the ears.

A helmet isn't a beret; so no wearing it at a jaunty angle. Neither should it be falling off the back of your head. Viewed from the side it ought to appear largely horizontal. As a guide you should be able to fit no more than two fingers between your eyebrows and the front edge of the helmet.



Kask 50 NTA

£85

Weight: 262g (size M)

Kask couldn't be more on trend with this hi-vis offering. Colour aside, the quality is fantastic. The shell has a really nice finish to it and the internal padding is excellent. The ratchet mechanism offers loads of adjustment, and the strap is height adjustable in two places. The fabric straps are equally high quality, and there's a lovely extra bit of foam near the buckle to protect against it rubbing on your neck. The helmet's rounder shape meant it wasn't ideally suited to our tester's head but the level of adjustability meant good fit and comfort were still achievable. The helmet is well vented without being overly breezy too. It's worth mentioning that Kask models only come in two sizes (medium and large) but they cover a huge range—the medium on test went from 48 to 58cm.
velobrands.co.uk



Rating



OVERALL
10
10



Spiuk Nexion

£85

Weight: 251g (size M)

Just looking at this helmet you get the impression it's going to be pretty aerodynamic with all its pointy fins and curves. These, along with plentiful vents ensuring a huge amount of airflow, mean at this time of year it's a little cold, although in summer it would be fantastic. The straps are anchored at one central point quite far forwards in the helmet so it's a struggle to get them in the right place each time you put it on – it took a few tries to stop them getting tangled. The internal adjustment band can't be shifted up and down and it uses a double-ended ratcheting strap rather than a wheel, which on occasion didn't centre properly on our test model, as one ratchet was a lot stiffer than the other.
silverfish-uk.com



Rating



OVERALL
7
10

SORE SITES

It pays to give some TLC to your undercarriage – after all, it's one of the key contact points between bike and rider. However, incorrect riding position and ill-fitting clothing can result in chafing and, in the worst cases, infected hair follicles that can lead to the cyclist's nemesis: saddle sores. They've been the downfall of some of cycling's greats – Tom Boonen described having a 'hole' in his scrotum during the 2011 Vuelta, and a

pain in the perineum forced Sean Kelly to quit the same race in 1987 two days from the finish, despite leading overall. So, saddle sores are no joke. While chamois creams won't cure the underlying cause, they do relieve inflammation, kill bacteria, ease discomfort and go some way to preventing them. Our testers applied a selection to their most sensitive area – the skin that rests on the saddle – to see if their cycle path was smoothed.

Saddle sores can be a right pain in the backside but you can help avoid them with liberal slap of chamois cream. We put eight to the test



Rapha Chamois Cream

£15 (150ml)

Being Rapha, we half expected the description on the tin to say, 'Hand-milked from free-range Tibetan yaks and tested on the withered haunches of Roger De Vlaeminck.' It doesn't. Instead, there's just a long list of ingredients and the faint whiff of ginger. The lotion has a light, creamy texture and a pleasingly cooling, soothing sensation on application. rapha.cc



Endura Chamois Cream

£9.99 (125ml)

This cream is so light it feels like foam. It absorbs quickly, supposedly 'providing an anti-bacterial barrier'. This combined with the germ-resistant pads in most bibshorts should ensure a chafe-free ride. We certainly found it comfortable, though we didn't have a microscope handy to check the germ toll. One tester's wife said it smelt and felt like 'something for a baby's bottom'. That's good, right? endurasport.com



Bristol Butt'r Anti-Chafing Cream

£14.50 inc p&p (180ml)

Is the word 'butter' trademarked or something? Or are chamois cream manufacturers so concerned a dozy cyclist might end up spreading it on their toast that they need to differentiate it with the use of a superfluous apostrophe? This cream is thick like a dairy product but the similarities end there. It contains tea tree oil for its antiseptic qualities and lavender for a nice scent. bristolbuttr.co.uk



DZ Nuts Pro Chamois Cream

£18 (120ml)

Judging by the price tag and the diagram used to illustrate the instructions ('Drop your shorts to your ankles'), this appears to be aimed at the rich and/or thick. It's endorsed by Dave Zabriskie who is quoted on the label: 'Nothing can ruin stage race success faster than an infected saddle sore.' Apart from being caught doping, eh, Dave? It has an antiseptic smell with a hint of peppermint. paligap.cc



BikesEtc

BEST
VALUE



Purple Harry Anti Chafing Chamois Cream

£9.99 (100ml)

Not to be confused with the same brand's wet-weather chain lube, which although cheaper should on no condition be used on your nethers. Comes in a bottle with a handy push-down dispenser and claims to be 'intentionally unfragranced to suit sensitive skin'. A viscous texture, took a bit of rubbing in. The only sample that came in an airport security-friendly size. purpleharry.co.uk

Paceline Products Chamois Butt'r

£12.99 (235ml)

That strategically placed apostrophe is still worrying us, mainly because it doesn't actually make the word any shorter. Etymological considerations aside, the packaging boldly declares: 'Immediately improves riding comfort.' All things are relative, however. Our test rides were comfortable, though not discernibly more so than before we had applied this light, non-greasy ointment. chamoisbuttr.com

Ozone Elite Protect Cream Chamois

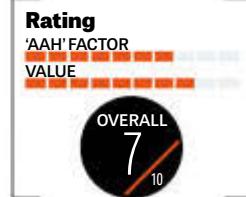
£13.99 (150ml)

This cream comes with some no-nonsense directions: 'Apply to groin and buttocks.' This we duly did, resulting in our hands being covered in a thick, greasy film – perhaps thanks to the germ-killing, skin-healing 'ozonised sunflower oil' – which required thorough rinsing under the taps before we could even pull our shorts up. The light citrus scent aside, this is disappointing. madison.co.uk

Udderly Smooth Chamois Cream

£9.99 (225 ml)

We've never heard of a cycling cow but the label to this curiously claims, 'Originally developed for use on dairy cows and now used by people around the world.' It does, however, contain shea butter, which can be found in a lot of body moisturisers. It's quite greasy, which caused a slight feeling of sliding around on the chamois during a three-hour ride. Odourless. udderlysmooth.co.uk





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£29.99**



NO TUBES, NO WORRIES

Replacing your tubes with a splash of sealant promises not only a puncture-free future but potentially faster and safer cycling

Like disc brakes and bolt-thru axles, tubeless tyres are a popular mountain bike development that has lately started to break through into the world of road bikes. The main advantage of tubeless tyres is being able to run them at lower pressures without risking a pinch flat (where the inner tube is caught between the tyre and rim) – lower pressure means the tyre can spread more, improving grip.

The good news for anyone wanting to try the technology is that you may not need to splash out on expensive new wheels – many modern hoops can be converted to tubeless with the right tyre, special rim tape and a squirt of sealant, which both helps seal the tyre on the rim and, in the event of a puncture, quickly clots to prevent air escaping.

Road tubeless tyres are still a niche product, but we've tested the three main brands currently available in the UK to see if they live up to the hype. Note that prices and weights given are per tyre. ■





TUBELESS TOOLKIT TIPS

You've got the tyres and wheels, all you need now is these accessories to get your tubeless system up and running...

Schwalbe Doc Blue Tyre Sealant, £7, schwalbe.com Pierce the tyre and the sealant sloshing around inside will form a clot, quickly halting further air loss.	Stan's NoTubes Tubeless Valve Stem, £14 (pack of 2), paligap.cc Universal stems with removable cores. A far better option than hacking the valves off your old inner tubes.
Bontrager TLR Flash Charger, £100, bontrager.com Build pressure in the pump before discharging it into your tyre in a single blast to help seat the tyre on the rim.	Fairy Original washing up liquid, £2, pg.com Tubeless tyres have very tight beads and can be difficult to seat. Ease them on with slippery dish soap.

Hutchinson Fusion 3
£60
Size: 700x25c Weight: 295g

While tubeless tyres have yet to gain universal popularity among road cyclists, they aren't actually a new invention – our tester first tried these tyres a few years ago, when they presented problems with seating and inflation. Installation proved much easier this time around (although a compressor was still required), which may be partly down to fitting them on different wheels. Once they're on, though, they stay on and maintain their pressure well. This might not seem important but Hutchinson is adamant that correct tyre pressure is essential to get the most out of tubeless tyres (for our tester's body weight, the recommended pressure is 95psi, which provided the benchmark for all the tyres on test). Out on the road, the tyres rolled well although they are the stiffest of the bunch and didn't feel particularly comfortable. Although this test wasn't long enough to ascertain long-term durability, the first time we used these tyres, we suffered a cut large enough in one that meant we couldn't run it tubeless any more, effectively turning it into a fairly heavy clincher tyre.

Rating
EASE OF INSTALLATION
HANDLING
VALUE

OVERALL **6** / 10

FIT AND FORGET

To get your tyres airtight without a tube, follow these steps...



1. Fit the valve stem through the rim and tighten in place using the collar. Be careful not to overtighten as this may damage the seal.



2. Apply a mixture of half washing up liquid, half water to the tyre beads – this helps them slide onto the rim and creates a better seal.



3. Install the tyre. Most brands recommend using only your fingers but if you must resort to levers, be careful not to damage the tyre bead.



Specialized Roubaix

£80

Size: 700x23/25c **Weight:** 295g

The Roubaix is unusual in that it's a hybrid of two sizes: it has a 25mm carcass but a 23mm tread, the idea being that the increased volume allows you to run a lower pressure while still maintaining a skinny contact area. They proved to be the easiest to fit of the three, seating properly when inflated with a track pump with no sealant and minimum fuss, but the dual width does give them an odd square look on the bike. We've used the standard clincher version of these tyres in the past and found the characteristics of this tubeless version are pretty similar. Run at 95psi, the tyre rolls well although it feels a little heavy and dead. The compound is grippy but you don't feel connected; this means it's hard to tell what's going on underneath you and as a result we didn't feel particularly confident when cornering. We put this down to a fairly large puncture belt inside – on the plus side, this feature means even less likelihood of punctures (we've been puncture-free on the standard version until they ran bare). Perhaps best used in winter when puncture protection is valued above all out performance.

specialized.com

Rating

EASE OF INSTALLATION
HANDLING
VALUE

OVERALL
8
10

Schwalbe One

£57

Size: 700x25c **Weight:** 305g

We're fans of the standard clincher version of the One at *BikesEtc*, so we were keen to see how they performed in the tubeless format. Fitting is reasonably trouble free: they inflate with a track pump (but require sealant to do so) and hold their pressure well. Schwalbe has taken a new direction with its tyres lately, insisting that one tyre can be good enough to run in all conditions. It claims the One's rubber is formulated to offer grip in all weathers and that the tread often seen on winter and wet weather tyres is purely for show. This is backed up by our experience with the standard version, which we've run year round from 2°C in the pouring rain to 32°C in sunshine. Schwalbe also claims the tubeless version has a lower rolling resistance than the standard variant, although we couldn't detect this, perhaps because of its higher weight – the tubeless model is 100g heavier than the standard version, and is the heaviest model on test. Despite this, it is also the quickest by quite a margin, and offers oodles of grip. On wider rims, the tyre's wide profile helps make it the most comfortable too. An excellent all-round tyre. 

Rating

EASE OF INSTALLATION
HANDLING
VALUE

OVERALL
9
10



4. Inflate to around 80psi. A quick burst of air helps seat the tyre – use a CO2 cartridge or the Bontrager TLR Flash Charger (see above left).



5. With the tyre seated, expel the air and remove the valve core by unscrewing. Pour in the latex sealant and replace the valve.



6. Pump the tyre to 80psi and spin the wheel to distribute the sealant. Check the bead is seated. If not, let some air out and wrestle into place.

BLOW UP

Smaller and quicker than traditional pumps, a CO₂ inflator could take the pain out of punctures

 Roadside puncture repair is a fact of cycling life, but one way to speed up the process is to carry some spare air around in tiny metal canisters. Swap your pierced tube, attach the inflator and with a whoosh of CO₂ you'll be rolling again in seconds – a standard 16g cartridge is good for around 100psi in most road tyres. Admittedly, squirting freezing compressed gas into your tubes is a more edgy proposition than using a traditional hand pump – no one wants their repair to end in a loud bang or frostbite. Luckily, most of the models here allow you to control the flow of gas and have sleeves to protect your fingers. While not quite as cheap as air, CO₂ cartridges can be bought bulk online for around 75p each – a fair price to avoid awkward minutes being scowled at by your companions next time you suffer a flat tyre.

Crankbrothers Sterling CO₂

£17

Weight: 42g Supplied with: two 16g canisters

With no insulation, you need to be careful when discharging the cartridge as the release of pressure leaves its exterior rather frosty (gloves may help). Slightly stout weight is matched by sturdy construction, with a rubberised grip on the head that extends down the neck of the canister. The ability to position your thumb directly above the nozzle means activating the push-on release mechanism is easier than with similar models.

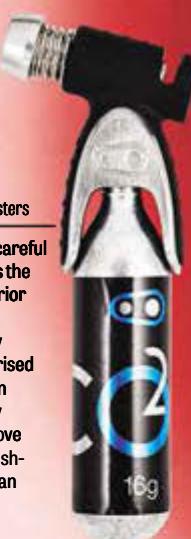
extrauk.co.uk

Rating



OVERALL

8
10



Truflo Minoot CO₂

£15

Weight: 24g Supplied with: one 16g canister

The Minoot's unusual design means that once pushed onto the valve it's necessary to slightly unscrew the cartridge to release the gas. Unwinding a canister of gas under 900psi of pressure pointed at your fingers is unnerving, but we survived unscathed. Still, the two-handed operation is unwieldy, making it hard to gauge the amount of pressure discharged. The head is also more prone to leakage than some others, resulting in the comparatively low score.

madison.co.uk

Rating



OVERALL

6
10



Birzman Zacco Inflator Set

£20

Weight: 33g Supplied with: three 16g canisters

The Zacco's full-length rubber and neoprene holster provides total coverage of both canister and head unit to protect your fingers against cold burn. The simple inflator joint operates via a push-on action that builds the pressure in a controlled way, making for confident inflation. With its reassuring level of insulation and competent head unit, the inclusion of three cartridges adds to the value of the package, making the Zacco our overall winner.

i-ride.co.uk

Rating



OVERALL

9
10



**Topeak AirBooster****£20**

Weight: 23g Supplied with: one 16g canister

Keep the head screwed to the top of the cartridge and simply flip it around to pierce it, ready for use. A fairly soft spring in the push-on head unit makes dispensing the gas easy but we wouldn't recommend putting it in a jersey pocket if there's gas left in the canister – you may end up freezing your backside. A very competent performer in a close competition; a second cartridge included in the price would have improved its score.

extrauk.co.uk

**Rating**OVERALL
7 / 10**Zefal EZ Push****£11**

Weight: 28g Supplied with: one 16g canister

Similar to several other designs, the EZ Push is a functional performer that's let down by small niggles. Chief among these is the push-on release mechanism, which is slightly awkward to use. The head is prone to leakage and while the hard plastic insulating sheath fits snugly on the included Zefal-brand cartridge, its lack of stretch means it is too loose or too tight on other brands.

zefal.com

**Rating**OVERALL
5 / 10**Specialized CPRO2****£18**

Weight: 27g Supplied with: one 16g canister

Although Specialized suggests unspent cartridges can be left attached to the head, the light action of the release valve meant this was not a prospect we relished, especially when storing it in a pocket. With no locking mechanism, it's best to store the head separately from the cartridge; it's small, though, so be careful not to lose it. It's a solid performer; although strangely the nozzle was the only part to get cold, meaning we didn't notice its lack of insulation.

[Specialized.com](http://specialized.com)

**Rating**OVERALL
6 / 10**Weldtite Jetvalve****£11**

Weight: 34g Supplied with: one 16g canister

The cheapest product on test and another push-to-activate model, the Jetvalve's low price belies a robust design and stylish looks. Despite the no-frills price it includes a neat and easily transferable insulating jacket to stop your hands getting cold. Once pushed onto the valve, the effort required to activate it is fairly stiff, although that means the chances of doing so accidentally are low. Its construction and operation make it hard to justify spending more on a similar design.

weldtite.co.uk

**Rating**OVERALL
8 / 10**JetBlack Scramjet****£20**

Weight: 54g Supplied with: one 16g canister

The only design to accommodate both threaded and threadless cartridges, which are stored inside the aluminium housing; simply flip them round and tighten the head. Screwing directly onto the valve, the rotating nozzle forms an airtight seal to ensure no gas is wasted, while the push-button trigger allows you to confidently control the amount released. Despite being cold to the touch after use, the housing protects your hands. It's a little bigger than the other models on test but its user-friendly operation is more than adequate compensation.

chickencycles.co.uk

**Rating**OVERALL
8 / 10

'SWAP YOUR TUBE, ATTACH THE INFLATOR AND WITH A WHOOSH OF CO₂ YOU'LL BE ROLLING AGAIN IN SECONDS'

SKS AirBuster**£20**

Weight: 53g Supplied with: one 16g canister

Controlling the flow of CO₂ via a large wheel allows measured inflation from this solid if slightly chunky inflator. A security catch ensures the canister can be stored safely until required – just make sure the control wheel is dialled in before priming. Using the same internal head parts as traditional SKS pumps, the AirBuster provides airtight sealing and the bottle cage mounted holster is a bonus. Our only small grumble is with the insulating cover, which can be a loose fit on some canisters.

zyro.co.uk

**Rating**OVERALL
8 / 10**Genuine Innovations Air Chuck****£25**

Weight: 17g Supplied with: two 16g canisters

A superior quality product backed by a lifetime warranty. The lightest on test, its minimalist design makes few concessions to ergonomics and a firm push is required to get the gas flowing. Not that this adversely affects its operation, which remains very assured. It comes with a pair of cartridges, one of which is a wide tyre friendly 20g model, which helps offset the higher price of this quality inflator.

zyro.co.uk

**Rating**OVERALL
7 / 10

**Wesley Doyle** Editor

Café du Cycliste
Geraldine City Jacket
p107

A good indication of success in the 'looks good on and off the bike' school of design is how often you actually wear the garment away from the bike. With Café du Cycliste's stylish Geraldine I volunteered to test it basically so I could wear it on a rare night out. As it turns out, it holds its own on the bike too.

**Cannondale Caad10
Racing Edition p82**

As someone whose first racer was a Raleigh I've always preferred metal to carbon but this Cannondale has the best of both worlds. Insanely light for an alu bike, it instills the confidence to push harder than most carbon frames I've ridden. Looks like '80s metal is making a comeback.

**Joseph Delves**

Staff Writer
Scope RC5 wheels p19

Having signed up to ride the Tour of Flanders sportive next month, I've been searching around for anything to help mitigate my pathetic level of fitness. The deep-section Scope wheels look like a good bet, although with the aero effect only kicking in above 18-20mph, it still might not be possible to buy my way out of trouble.

**Andy Waterman** Deputy Editor**Daylight**

Hey, the clocks are about to go forwards (29th March) and for me it can't come soon enough. I've ridden more in the dark this winter than ever before and I'm sick of it – bring on bright, warm evenings, commuting in short sleeves, and never getting caught out when your lights run out of battery two miles from home.

A Peak District Pied à Terre p38

Our route around Buxton was the best ride I've done on drop bars ever. It had everything – speed, epic conditions, incredible views, significant distance and some of the most fun descents I've ridden. It's amazing what you can get away with on disc-braked gravel bikes, especially with no cars to contend with. I can't wait to go back – if only *BikesEtc* had a base there!

**Andrew Sumner****Art Director**

Recovery grilled cheese
p49

A grilled cheese sandwich is great recovery food for a hangover, but who knew that useful fats and proteins also make it ideal for recovering post ride? Sadly, sports nutritionist Emma Barraclough didn't have similarly good news about alcohol itself, which it turns out is still bad for you.



Etc

The *BikesEtc* team picks out some of its favourite items featured in this month's issue...

**Bike Fast Fit app p74**

I've always taken a suck-it-and-see approach to setting up my bike but after learning about the Bike Fast Fit app in our saddle height feature, I realised there's no longer any excuse for not being more scientific. It's too soon to say if it has helped my aching back but at just £3.99, it's a cheap experiment.

David Kenning

Production Editor
Schwalbe One tubeless tyres p125

I've been avidly following Steve Abraham's attempt to break Tommy Godwin's annual mileage record ([see *oneyeartrial.org.uk*](http://oneyeartrial.org.uk)) but as well as admiring the man himself, it's interesting to see how his kit has performed. The Schwalbe One tubeless is his mile-eating tyre of choice and now it gets a *BikesEtc* Best In Test award too. High recommendation indeed. Looks like it could be time to switch to tubeless.



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Britain's toughest rides

ISM - the art of sitting comfortably

As Sportive riders spend longer in the saddle to achieve their goals, the need to sit comfortably in an efficient sitting position is more obvious than ever.

ISM has a decade of success being widely adopted by Triathletes. Now with an improved range of "Performance Narrow" saddles our comfort benefits can be experienced by Sportive and Road cyclists who want to sit comfortably for longer periods than traditional "nosed" saddles" will allow.



Traditional Saddle - Nose puts pressure on the soft tissue between the sit bones. Research studies have linked this perineal pressure to numbness, urinary tract and yeast infections and prostate inflammation.



For Sportive riders our Performance Narrow saddles: Attack, PN 1.1 and PN 2.0 now offer more thigh and hamstring clearance.



ISM no nose design - Rest your weight on the "sit bones" and pubic rami bones of the pelvis, instead of soft tissue areas. The result is maximum blood flow in the soft tissue between your legs, resulting in no numbness, and complete comfort. ISM saddles are not gender-specific. Saddle position allows fit to be tuned to rider and different levels of padding are available across models.



09



15



32



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Kick off your season with a choice of great spring rides, starting with a Good Friday 100-miler in the Garden of England

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May

Featuring rides from Cornwall to Tayside, via the Tour de Yorkshire, plus top tips to ensure your bike is ready for action



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June
 A packed month, with everything from a Gran Fondo in Northern Ireland to an overnight ride along the Norfolk coast

July
 Are you ready to take on a Welsh Monster and Lakeland's High Passes? Plus a handy checklist of saddlebag essentials

August
 The action hots up with Britain's toughest sportives, plus road riding etiquette and the experts' four-week training plan

September
 Ride the length of the Welsh coast, tackle the South Downs or join 3,000 riders in Manchester for one of Britain's biggest charity cycling events

October/ November
 Enjoy falling leaves in the Lake District, a fast, flat blast through Essex or the stunning scenery of Land's End

Best of Europe
 Six of the best Continental sportives, from high-speed thrills in Berlin to vintage bikes and leg-busting climbs in Italy



ARE YOU READY FOR A CHALLENGE?

Well, you've come to exactly the right place...

Here in the UK, we've gone barmy for cycle sportives, and with good reason. These timed but non-competitive events offer a great mix of challenging climbs, twisty roads and a fantastic atmosphere, all set against the backdrop of stunning British scenery. They also offer a variety of routes to suit cyclists of all abilities – the longer routes may be steeper, and the flat sections faster, but shorter routes are designed for newcomers to sample the world of sportives.

Don't expect a walk (or ride) in the park, though. As coach Will Newton says, 'Pro races tend to take place on main roads with good surfaces. Sportives will take you up steep, narrow lanes and back down again just for the hell of it.'

Sounds tough? Don't be put off – it doesn't mean you can't do it. To help you choose the right events for you, we've hand-picked the best sportives the UK has to offer over the 2015 season for all abilities. And to help ensure you reach the finish, our expert coaches offer advice on training, preparing your bike and how to break through the pain barrier along the way.

We also have tips on cycling etiquette, advice on what to pack, and how to be your best on the bike – basically everything you'll need for a great day in the saddle. Oh, and for when you're ready to step up to the next level, our experts (below) have picked out Britain's toughest sportives. There's also a selection of the best events from around Europe, where sportives get *really* hard.

Whatever your level of fitness or ability, there's a sportive for you. All you have to do now is read on, and then get out there.



MICHAEL DONLEVY
SPORTIVE GUIDE
EDITOR

MEET THE EXPERTS

OUR THREE COACHES WILL PROVIDE INSIDER INFO ALONG THE WAY



Ian Goodhew

One of the country's most experienced coaches, Ian has worked at the Southern Centre of Excellence, has managed pro teams and currently works with sportive organiser Andy Cook Cycling.



Ric Stern

Since founding RST Sport in 1998, Ric has coached pros and amateurs. A firm believer in scientific training principles, he has authored research work and contributed to newspapers and cycling magazines.



Will Newton

Will has been coaching triathletes and cyclists since 1998, from world champs to amateurs. He seeks alternative ideas from disciplines outside of endurance sports to give his clients a competitive edge.

DEMO our saddles



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above. ISMSEAT.com for retailer listing.**

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04

APRIL

Good Friday Sportive



Where: Folkestone, Kent

When: 3 April

Distance: 38/74/100 miles

Price: £22/£28/£28

Sign up: icyleevents.co.uk/the-good-friday-sportive

Kick off Easter weekend with a ride that takes in an ascent of the Devil's Kneading Trough and Britain's most haunted village, Pluckley. There's also a climb up Blackhouse Hill to the finish at Folkestone Rugby Club.

Lakeland Classics: Shap Spring Classic



Where: Shap, Cumbria

When: 12 April

Distance: 75 miles

Price: £25

Sign up: seismic-events.co.uk

The first of three sportives in the Lakeland Classics series, this uses quiet roads between the Eastern Lakes and the Pennines. If you enter all three (see July and October) and you're feeling competitive, you can sign up to be awarded an overall accumulated time.

Rapha Hell of the North



Where: Highgate, London

When: 12 April

Distance: 62 miles

Price: free

Sign up: pagesrapha.cc/events/hell-of-the-north-v

Rapha's homage to Paris-Roubaix takes you on a tour of potholes and mud that's as close as the UK comes to the famed cobbles. After, you can watch the Classic race itself in a New Barnet pub garden.

Cornwall Tor: The Atlantic Rollercoaster



Where: Wadebridge, Cornwall

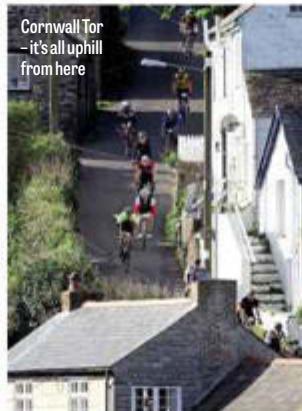
When: 19 April

Distance: 50/83/110 miles

Price: £30/£32/£35

Sign up: kiloto.com

Climbs abound on this route along the North Atlantic coast, including the Coombe Valley, Crackington Haven and Port Quin. Camping tickets are available on entry if you want to really get back to nature and make a weekend of it.



Wiggle Spring Saddle Sportive



Where: Newmarket, Suffolk

When: 19 April

Distance: 38/73/100 miles

Price: £23/£33/£33

Sign up: ukcyclingevents.co.uk

Starting and finishing at Newmarket Race Course (you can't miss it), the course is flat and Wiggle scores the three distances 1.5, 2 and 2.5 on a difficulty rating out of five, making it ideal for newcomers and those who want a fast time.

Tour of Pembrokeshire



Where: St David's, Pembrokeshire

When: 25 April

Distance: 50/75/100 miles

Price: From £35

Sign up: tourofpembrokeshire.co.uk

Starting in the southwest corner of Wales, the course takes in the Pembrokeshire Coast National Park, and the longest route takes you along the west coast all the way to Cardigan and back.

Etape Loch Ness



Where: Inverness

When: 26 April

Distance: 66 miles

Price: £58

Sign up: etapelochness.com

Starting and finishing in the Highland capital of Inverness, the Etape Loch Ness features 900m of ascent – manageable if you've been training right – and features a special timed King of the Mountain 4.8-mile climb 34 miles into the route if you're feeling up for a race.

Evans Cycles Ride It North York Moors



Where: Helmsley, North Yorkshire

When: 26 April

Distance: 14/34/68/89 miles

Price: £7.50/

£18.50/£18.50/£18.50

Sign up: evanscycles.com/ride-it

Despite a new starting point at the Duncombe Park country estate, the route retains popular roads through the North York Moors National Park and up the challenging White Horse Bank climb.

05

MAY

BikesEtc
SPORTIVE GUIDE
 APRIL/MAY 2015

Tour de Yorkshire



Where: Leeds,
West Yorkshire

When: 3 May

Distance: 31/67/87 miles

Price: £42/£46/£49

Sign up: letour.yorkshire.com/tour-de-yorkshire/sportive

Building on the legacy of the Tour de France's visit to Yorkshire in 2014, the Tour de Yorkshire takes place on the same day and uses the same roads as stage three of the pro race. There's a women-only Cycletta option too.



Wiggle Wye Valley Warrior Sportive



Where: Chepstow,
Monmouthshire

When: 3 May

Distance: 40/79/101 miles

Price: £23/£33/£33

Sign up: ukcyclingevents.co.uk

The 101-mile Warrior Sportive course has a difficulty rating of 5/5 and takes in the Forest of Dean, the Wye Valley and Black Mountains. If you want something a little easier on the legs, the 79-mile route is rated 3.5/5 and the 40-miler 3/5.

Eden Classic



Where: Eden Project,
Bodelva, Cornwall

When: 10 May

Distance: 35/62/100 miles

Price: £23/£27/£31

Sign up: edenproject.com

The ride starts off passing the iconic rainforest before heading straight into a climb dominated by Alpine-style hairpin bends. All three routes are challenging, with 2,433m of climbing on the long route. Admission is free on the day to family and friends.

London Cycle Sportive



Where: Herne Hill
Velodrome, London

When: 10 May

Distance: 30/64/103 miles

Price: £40/£46/£48

Sign up: humanrace.co.uk/cycling

On the long course, you'll get to ride some of the UK's most famous cycling spots: Dulwich Park, Surrey Hills and Box Hill – as seen in the 2012 Olympic Road Race. The route finishes with a lap of the velodrome.

05

MAY

Velo29-Altura Buttertubs



Where: Darlington, Co Durham

When: 16 May

Distance: 31/61/95 miles

Price: £15/£25/£25

Sign up: velo29events.com

This new event starts at Croft Motor Circuit and takes in popular climbs such as Grinton Moor and Swaledale before climaxing with the 493m high Buttertubs Pass – one of the highlights of the opening stage of the 2014 Tour de France.

The Great Western Sportive



Where: Swindon, Wiltshire

When: 17 May

Distance: 52/74/107 miles

Price: £26/£28/£29

Sign up: southernsportive.com

This tour through the Marlborough Downs and Avon Valley has plenty of climbs, totalling 2,100m on the full course, and fast descents on wide, open roads. It won't break you, but you'll know you've spent a day in the saddle.

Tour of the Peak



Where: Bakewell, Derbyshire

When: 17 May

Distance: 62/115 miles

Price: £32/£35

Sign up: kilogo.com

Iconic climbs including the 524m-high Holme Moss (which featured in stage two of the 2014 Tour de France), seven-mile Cat 'n' Fiddle and a timed climb up Winnat's Pass. Not for the faint-hearted, but spectacular if you feel strong.

The CFC Sportive



Where: Stratford-upon-Avon, Warwickshire

When: 24 May

Distance: 30/64/100/150 miles

Price: £15/£25/£25/£25

Sign up: cyclistsfc.org.uk/events

The Cyclists Fighting Cancer Sportive, formerly known as the Wheel Heroes, starts at Stratford Racecourse and takes you on a tour of the Cotswolds. Perfect prep for longer-distance multi-day sportives and a great day out in itself.

Cairn O'Mount Challenge



Where: Edzell, Angus

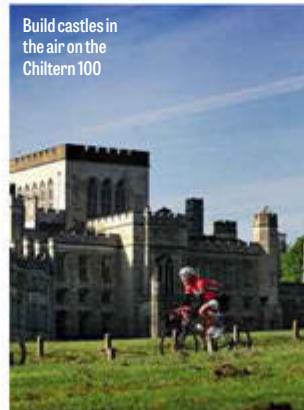
When: 30 May

Distance: 30/80 miles

Price: £30

Sign up: cairnomountchallenge.org.uk

An ideal event for the first-timer, this sportive takes in stunning Scottish scenery on quiet roads over manageable climbs and long, flat stretches. The shorter route in particular is perfect for those who want a gentle intro to sportives.



Chiltern 100 Sportive



Where: Chesham, Buckinghamshire

When: 31 May

Distance: 76/110 miles

Price: £40/£42

Sign up: humanrace.co.uk/cycling

Starting from Bovingdon Airfield, this hilly sportive takes in the infamous Whiteleaf Hill and worryingly named Wardrobes climbs. Bear in mind that it bills itself 'the toughest sportive close to the capital'!

TIPS



TYRES

'Check your tyres are fitted correctly,' says RST Sport head coach Ric Stern. 'If the bead is on the inner tube, you'll flat straight away. In wet conditions, tyres should be inflated at the lower end of the recommended pressure range to help with grip.'



HEADSET

According to Stern, 'the headset should be adjusted correctly and not judder when braking.'



GEARS

'Ensure your gears work smoothly and you can engage the lowest and highest,' says Stern. 'Understand how they work and how you use them,' adds coach Ian Goodhew. 'Do you want big gears to ride out of the saddle like Contador or small gears to ride in the saddle like Froome?'



SADDLE

'You could be in the saddle for eight hours so you need to be comfortable,' says Goodhew. 'You shouldn't adopt an extreme position for that length of time. It's worth getting a proper bike fit if you're in any doubt.'



ANATOMY OF A SPORTIVE BIKE

YOU'VE GOT THE BIKE, BUT YOU HAVE TO BE SURE IT WON'T LET YOU DOWN



BRAKES

'Check your brakes work and that the cables aren't rusty or sticking when you pull on the levers,' says Stern. 'Check the brake blocks aren't worn out too,' adds Ian Newton. 'If you're nervous and keep touching the brakes, there's more chance they're worn.'



CHAIN

'Check the chain is clean but also use your index finger on the gears to check they shift,' says Newton. 'It helps to know your way around a chainset in case you have any problems on the day.'



HANDLEBARS

'Whatever you do, don't use tri bars,' says Goodhew. 'It's not the done thing and you'll upset a lot of people!'

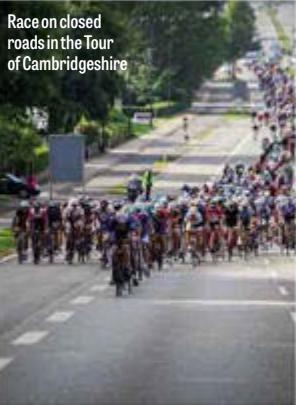


AND FINALLY...

'If in doubt, take your bike to a qualified bike mechanic for an MoT,' says Stern. 'Build a relationship with your bike shop,' adds Newton. 'They can check things like your gears in 30 seconds. You want to be comfortable but don't be want to sat up in a begging position.'

06

JUNE



Tour of Cambridgeshire



Where: Peterborough, Cambridgeshire

When: 6/7 June

Distance: 17 miles (TT)/82 miles

Price: £34/£56

Sign up: tourofcambridgeshire.com

Saturday 6th June sees the UK's first UCI WCT (amateur world championships) event, a 28km time-trial. On Sunday, the Gran Fondo (an amateur mass-start race) sends riders out into the countryside on closed roads.

Keswick Sportive



Where: Keswick, Cumbria

When: 6 June

Distance: 28/55/66 miles

Price: £28

Sign up: seismic-events.co.uk

The Keswick's three routes provide three levels of climbing so you can choose how tough you want the event to be. The courses offer two, four and six passes, and the 66-mile option includes the famous Lakeland Passes.

Velothon Wales



Where: Cardiff

When: 14 June

Distance: 31/75 miles

Price: £30 (charity entries only)
Sign up: velothon-wales.co.uk

Another sportive that's tied into a UCI-sanctioned pro race, Velothon Wales takes in more than 1,400m of climbing, including Caerphilly Mountain and a timed King of the Mountains section on a stretch of the Brecon Beacons featured in the 2014 Tour of Britain.

Ribble Valley Ride



Where: Whalley, Lancashire

When: 14 June

Distance: 25/60/100 miles

Price: £15/£20/£25

Sign up: ribblevalleyride.org

The Ribble Valley Ride takes a slightly different route through the Yorkshire Dales than other rides in the region. The 100-mile Expert route is challenging, but the 25-mile Challenge route is ideal for beginners who want to tackle their first sportive.



Three Peaks Classic



Where: Settle, North Yorkshire

When: 14 June

Distance: 65/83 miles

Price: £28

Sign up: 3peaksclassic.co.uk

As you'd expect from the name, this sportive sends you up three of the Yorkshire Dales' famous peaks: Pen-y-Ghent, Whernside and Ingleborough. The latter includes a short but brutal climb, but the 65-mile option skips the tougher ascents.



Virgin Money Cyclone



Where: Newcastle-upon-Tyne
When: 20 June

Distance: 34/64/106 miles

Price: £28

Sign up: virginmoneycyclone.co.uk

Based at Newcastle Falcons RFC, the Virgin Money Cyclone caters to all abilities – the 34-mile option is gently undulating and suited to families, while the longest route includes 2,374m of ascent over eight climbs.

Eroica Britannia



Where: Bakewell, Derbyshire
When: 21 June

Distance: 30/55/100 miles

Price: £10 (festival)/£60 (ride)

Sign up: erobicbritannia.co.uk

A three-day festival climaxes with this tour of the Peak District that celebrates the history of cycling – all bikes must be pre-1987. You'll see stunning classic bikes and kit along the way. Handlebar moustaches are also welcome.

Gran Fondo Giro d'Italia Northern Ireland



Where: Belfast

When: 21 June

Distance: 36/110 miles

Price: £45/£55

Sign up: granfondogiroditaliani.com

Affiliated to the legendary Italian Grand Tour, this closed-road Gran Fondo (amateur race) offers a gentle 36-mile route or a tough 110 miles taking in the stunning Mourne Mountains, both with full mechanical support en route.

Hero Ride East



Where: Colchester, Essex

When: 21 June

Distance: 100 miles

Price: £85

Sign up: helpforheroes.org.uk

Raising money for injured servicemen, you'll ride through the night via London and arrive in Windsor in time for breakfast. There's also an option that starts in London and rides from the north and west.



06

JUNE

Dartmoor Classic



Where: Newton Abbot, Devon

When: 21 June

Distance: 34/67/107 miles

Price: reserve list only

Sign up: dartmoorclassic.co.uk

Based at Newton Abbot Racecourse on the edge of Dartmoor, the Classic takes in some ferociously steep climbs. The 2015 event is sold out but you can put your name on the reserve list and keep an eye out for details of the 2016 event.

Impsport Championship Sportive



Where: Lincoln, Lincolnshire

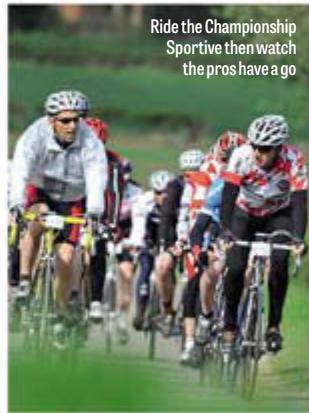
When: 27 June

Distance: 30/58/76/97 miles

Price: £20/£35/£35/£35

Sign up: itpevents.co.uk

The Saturday sportive is followed by the National Road Race Championships to round off the weekend. The longer courses take riders into the Lincolnshire Wolds and finish with a gruelling 12% cobbled climb up to Lincoln Castle.



Wiggle Chiltern Classic Sportive



Where: High Wycombe, Bucks

When: 27 June

Distance: 45/80/100 miles

Price: £23/£33/£33

Sign up: ukcyclingevents.co.uk

This sportive through the Chiltern Hills and Vale of Aylesbury offers a variety of challenges from the relatively easy Short Route through to the tougher Epic option, which has some climbs that beginners will find fairly challenging.



Chase the Rising Sun



Where: Hunstanton, Norfolk

When: 27 June

Distance: 100 miles

Price: £35 (plus £20 for bus transfer and £16 for bike box)

Sign up: cyclesportivesuk.co.uk

Starting at sunset, this takes you along the north Norfolk coast arriving in time for sunrise in Southwold. There's a food stop at halfway and optional bus transfer for you and your bike back to Hunstanton.

Evans Cycles Ride It North Downs



Where: Dorking, Surrey

When: 28 June

Distance: 12/30/

50/70 miles

Price: £7.50/£18.50/
£18.50/£18.50

Sign up: evanscycles.com

Run in conjunction with the National Trust, you're guaranteed stunning scenery on routes that take in the North Downs, with climbs up Leith Hill and Whitedown.

07

JULY

BikesEtc
SPORTIVE GUIDE
JULY 2015



Etape de Yorkshire



Where: Harewood House, West Yorkshire
When: 4 July

Distance: 95/122 miles

Price: £30/£35

Sign up: cyclistsfc.org.uk/events

To mark the anniversary of the Tour de France, this course starting at Harewood House near Leeds follows the route (and a bit more) of 2014's opening stage. You'll take in 735m total elevation, including Kidstones and Grinton Moor.

Dunoon Full Moon Ride



Where: Glasgow
When: 4 July
Distance: 77/109 miles

Price: £30/£35

Sign up: dunoondynamo.wordpress.com

Dubbed 'Alpe d'Huez meets Ibiza', this overnighter starts in Glasgow at 9pm and features DJs, bands and fireworks along the route. You'll arrive at Dunoon for a sunrise barbecue and (for an extra £30) return to Glasgow by boat.



Buxton Spa Sportive



Where: Buxton, Derbyshire
When: 5 July

Distance: 34/55/85 miles

Price: £20/£22.50/£27.50

Sign up: darkwhitecycling.co.uk

A route well known to Tour of Britain riders. The Short Course offers a blood-pumping 1,309m of ascent, but the 85-miler is a brute with the notorious Long Hill and Star Bank included in the total 3,006m of ascent.

07

JULY

TIPS



RIDE FOOD

'When it comes to food and drink, take what you train with and nothing but,' says coach Will Newton. 'I've lost count of the number of people who use nutrition products for the first time on a sportive and are ill because it's not what they're used to.'



GLOVES

'Always useful, especially in group situations, as crashing and ripping your palms off on the road surface is no fun whatsoever,' says coach Ric Stern.



TOOLS AND SPARES

'Take a multitool, two spare inner tubes and a mini pump rated to 100psi or you'll have trouble inflating,' says coach Ian Goodhew. 'The service vehicle may be a long way behind you,' adds Stern.



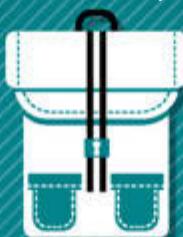
PROTECTIVE CLOTHING

Newton says, 'I'd take a windproof jacket, and only take a waterproof jacket if you know it's going to rain all day. A windproof jacket is more breathable so the water dissipates quickly if it's just a 20-minute shower, plus it's less bulky so easier to carry in a pocket.'



CHANGE OF CLOTHES

'Don't forget civvies to change into when you finish the event,' says Stern. 'There's nothing worse than sitting around in stinking, smelly cycling kit.'



PACK YOUR BAG

**DON'T TURN UP UNPREPARED.
TAKE THESE ESSENTIAL
ITEMS ON THE DAY**



TOILET ROLL

'It's a good idea to carry a toilet roll in your kit bag,' says Stern. 'I've seen people on races and sportives who've found themselves in an unfunny situation...'



ID

'Accidents can happen,' says Goodhew. 'I use IceID [iceid.co.uk] products, which include dog tags, bracelets and helmet straps. If you're alone overnight, take a business card from the hotel so people know where your stuff is.'



SHORTS

'Good-quality bibshorts are ideal and should be comfortable for you to provide padding around your delicate areas,' says Stern.



MONEY

'Always worth carrying in case you need a drink,' says Goodhew. 'Never assume you'll have enough ride food or that the organiser's food will be what you're used to. This is not the time to experiment.'



The Monster



Where: Llangadog,
Carmarthenshire

When: 11 July

Distance: 119 miles

Price: £26

Sign up: acycling.com

More than just an endurance challenge, the Monster features 4,400m of climbing over a course around quiet roads in mid-Wales. Places are limited to 100 and it will be open for entry by the time you read this, so get in quick. The organisers offer a service where you can have your own nutrition and clothing dropped off at feed stations along the route. One to put on your 'to do' list.

07

JULY

Bike Bath



Where: Bath Recreation Ground
When: 5 July

Distance: 25/50/80 miles

Price: £18/£33/£33

Sign up: bikebath.co.uk

Although the precise routes are still to be announced, anyone who knows Bath is aware that it is both hilly and spectacular. This is a family-friendly event that has a high proportion of female entrants, and under-16s can enter if they are accompanied by an adult.



Scrub up on your hill starts for Bike Bath

Gran Día En Verano



Where: North Muskham, Nottinghamshire
When: 11 July

Distance: 108/157/206 miles

Price: £23/£31/£35

Sign up: britishcycling.org.uk

It's an endurance challenge, yes, but the courses are relatively flat so they're a test of stamina rather than climbing ability. The 206-mile version is named the Tommy Godwin after the record holder for the most miles cycled in a calendar year – 75,065 miles in 1939.

Reigate Rouleur



Where: Reigate, Surrey
When: 12 July

Distance: 55/62/84 miles

Price: £22/£23/£24

Sign up: southernsportive.com

A well-balanced, challenging yet manageable sportive with three route options taking in the North Downs and Weald of Kent. The full 135km (84 mile) version starts gently before a hilly middle section then a long, fast run to the finish through glorious countryside.

The Warrior



Where: Hertsmonceux, East Sussex
When: 12 July

Distance: 40/65/90 miles

Price: £22/£25/£27

Sign up: velopace.com

This appropriately named sportive is set around the ancient battlefields and castles of East Sussex and Kent, including Camber, Ypres Castle and Battle Abbey. There's even a cobbled section to make you believe you're taking part in a slightly belated Spring Classic.

Wiggle MagnifiCat



Where: Newbury, Berkshire
When: 12 July

Distance: 44/85/128 miles

Price: £26/£36/£36

Sign up: ukcyclingevents.co.uk

Modelled on the European Golden Bike Events, the MagnifiCat takes in rolling Hampshire countryside, the South Downs and some testing climbs. There's a good range of distances, which get increasingly more difficult as they get longer.

The Devil's Challenge



Where: Llandrindod Wells, Powys
When: 18 July

Distance: 24/49/72/88 miles

Price: £10/£25/£25/£25

Sign up: redkiteevents.co.uk

There might be degrees of difficulty, but there is no easy option here. This sportive is based around climbing the Devil's Staircase, so you'll need to include plenty of hills in your training. The Epic route includes 2,999m of ascent.



PHOTO: THE VALLEY PHOTOGRAPHER

Wiggle Mendips Sportive



Where: Shepton Mallet, Somerset
When: 18 July

Distance: 61/91 miles

Price: £33

Sign up: ukcyclingevents.co.uk

Tough without being insane, the two routes on offer through the Mendip Hills are enjoyably challenging. The roads are quiet but can get steep, as ascents include the testing Burrington Combe and the slightly more famous Cheddar Gorge.

1066 Cyclosportive



Where: Burgess Hill, West Sussex
When: 19 July

Distance: 40/66/85/104 miles

Price: £30

Sign up: srs-events.cc

Celebrate a slice of British history on a sportive that takes you from Burgess Hill via the South Downs and Ashdown Forest to Battle. The long route is flat for the first 25 miles but don't be fooled – there's 2,291m of ascent to come.



Round Norfolk Epic



Where: Great Yarmouth, Norfolk
When: 19 July

Distance: 200 miles

Price: £45

Sign up: cyclesportivesuk.co.uk

Based at Great Yarmouth racecourse, this sportive aims to live up to the Epic billing by taking you around 200 miles of Norfolk countryside. The roads are rolling rather than steep, but you'll need to train for a long day in the saddle.

Circuit of the Fens Grand Prix Sportive



Where: Whittlesey, Cambridgeshire
When: 25 July

Distance: 37/83/132 miles

Price: £12/£20/£27

Sign up: wheelsinwheels.com

For the second time, this sportive is run the day before the Professional Grand Prix road race. Starting on the edge of the East Anglian fens, the 37-mile Come And Try is ideal for first-timers. There's also a Raleigh Road Show.

Lakeland Classics: Tour of the High Passes



Where: Coniston, Cumbria
When: 19 July

Distance: 51/91 miles

Price: £25/£30

Sign up: seismic-events.co.uk

The second of the Lakeland Classics series, the Tour of the High Passes takes in 10 of the region's most notorious climbs, totalling 4,000m of ascent over the full 91-mile route, circling from the heart of the Lake District to the coast and back.

Torelli Jodrell Bank Summer Sportive



Where: Poynton, Cheshire
When: 26 July

Distance: 30/65/100 miles

Price: £22.50/£27.50/£27/50 (£30/£35/£35 on the day)

Sign up: jbsummersportive2015.blogspot.co.uk

You don't need to book this one – if you forget to secure your place, just turn up on the day and tackle the Cheshire Plains with Team Torelli Cycling Club.

08 AUGUST

Wiggle Hell of Hexham Sportive



Where: Hexham, Northumberland

When: 1 August

Distance: 52/87/100 miles

Price: £23/£33/£33

Sign up: ukcyclingevents.co.uk

This course has a remote feel about it, passing disused mines and out-of-season ski lifts along the way. The seriously tough Epic route takes in several tough climbs including Chapel Fell, White Hill and – the clue's in the name – Long Hill.

Woodcote Chilterns Classic



Where: Woodcote, Oxfordshire

When: 2 August

Distance: 58/67/89 miles

Price: £22/£23/£24

Sign up: southernsportive.com

A varied route will take you on a tour along the Thames Valley, South Chilterns and Oxfordshire Ridgeway. It's not for the faint-hearted – even the final stretch has undulating roads and sweeping descents with two big kicks near the end.



RideLondon –
Boris Bikes
not permitted



Prudential RideLondon-Surrey 100



Where: Queen Elizabeth Olympic Park, London

When: 2 August

Distance: 100 miles

Price: TBC (charity entries only)
Sign up: prudentialridelondon.co.uk

Building on the legacy of the London 2012 Olympics, this starts at the Queen Elizabeth Olympic Park in Stratford before heading out into the countryside over a route based on the 2012 Road Race.

Nouveau Etape – Velo29 Tour of the Pennines



Where: Barnard Castle, Co Durham

When: 8 August

Distance: 43/80 miles

Price: £20/£30

Sign up: velo29events.com

Traffic won't be a problem on the Tour of the Pennines – although the roads aren't closed, they're little used, so this figure-of-eight course will allow you to enjoy the scenery as well as some tough climbs and fast descents.

Galloway ReCycle Sportive



Where: Kirkcudbright,
Dumfries & Galloway

When: 8 August

Distance: 30/67/102 miles

Price: £25

Sign up: gallowayrecycle.sportive.co.uk

Rolling hills and quiet roads make for a pleasant day in the saddle (weather permitting), and the start/finish town of Kirkcudbright hosts entertainment for spectators while you're away on business.



Galloway girl

Rise Above Sportive

Where: Chester, Cheshire

When: 9 August

Distance: 46/75/115 miles

Price: £31.50

Sign up: risedabovesportive.com

Ride alongside Mark Cavendish on the 25-time Tour de France stage winner's official sportive. All three routes start and finish in Chester, heading in a loop via North Wales and Snowdonia, while the 115-mile Extremist Route has 2,800m of climbing.

TIPS

HAND SIGNALS

ALERTING RIDERS COULD SAVE YOU A TRIP TO A&E - SO LONG AS YOU KNOW WHAT THEY MEAN



POINTING ACROSS BACK

Indicates that there is an obstruction ahead and that the whole group needs to move in the direction indicated to avoid it.



LOW HAND MOVING IN A PATTING MOTION

Indicates group is slowing down.



HAND UP IN AIR

Indicates group is stopping.



POINTING DOWN AT ROAD

Indicates obstruction or hazard on road such as drain cover, pothole or debris.

THE TRAINING PLAN

GET IN SHAPE FOR A SPORTIVE IN FOUR WEEKS

Let's assume you ride regularly, perhaps to and from work, for up to seven hours a week, but for no more than two hours at a time. You want to tackle a 60-mile sportive with a view to entering a 100-mile event later in the season. This training plan from RST Sport head coach Ric Stern will get you started. See below for a guide to training zones...



	WEEK 1	WEEK 2	WEEK 3
SUN	1hr 30mins LR. Focus on smooth pedalling and practise taking on food. Zone 1, 3-4 on hills	2hr LR with TTI 3-4x5mins. Long ride zone 1, 3-4 on hills with shorter threshold tolerance intervals	2hr LR with TTI 4-5x5mins. Long ride (zone 1, 3-4 on hills) with shorter threshold tolerance intervals
MON	1hr R. Easy spin. Avoid hills. Zone 0	1hr R. Easy spin. Zone 0, avoid hills	1hr R. Easy spin. Zone 0, avoid hills
TUES	1hr SR. Steady ride on flat terrain. Zone 1, 3 on hills	1hr SR with 10mins MIET. Steady ride with block of hard tempo. Zone 1,3 on hills	1hr SR with 20mins MIET. Steady ride with block of hard tempo. Zone 1,3-4 on hills
WEDS	1hr SR with FS 4x10secs. Steady ride with fast sprints from rolling start in moderate gear (53x17). Zone 1, 3-4 on hills, all out on sprints	1hr SR with FS 4x10secs. Steady ride with fast sprints from rolling start in moderate gear (53x17). Zone 1, 3-4 on hills, all out on sprints	1hr SR with FS 6-8x10secs. Steady ride with fast sprints from rolling start in moderate gear (53x17). Zone 1, 3-4 on hills, all out on sprints
THURS	1hr R. Avoid hills. Zone 0	1hr R. Avoid hills. Zone 0	1hr SR. Fitness should be improving so add in steady ride. Zone 1, 3-4 on hills
FRI	1hr SR including 30mins ET. Zone 1, 3-4 on hills, ET zone 2, 4-5 on hills	1hr ET. Solid endurance effort, pushing on hills. Zone 2, 4-5 on hills	1hr ET. Core endurance effort, pushing on hills. Zone 2, 4-5 on hills
SAT	REST DAY	REST DAY	REST DAY

TRAINING ZONES

Zone 0 is a recovery ride at easiest possible pace (4/10 on a rate of perceived effort). Zone 4 is race pace, zone 5 all-out effort.

RECOVERY RIDES (R)

Terrain that's as flat as possible. Cadence is moderate (75-90rpm) with gearing low (42x19-17). Aim is to speed recovery after consecutive days training or hard sessions.

LONG RIDES (LR)/STEADY RIDES (SR)

Zone 1 on the flat. Minimal hills, steep gradients avoided. Cadence is 85-100rpm.

Rides increase base endurance and maintain aerobic fitness.

ENDURANCE TRAINING (ET)

Zone 2 on the flat. Flat terrain/moderate hills. Intensity on climbs up to zone 4, try to remain seated. Keep cadence at 70-90rpm uphill.

MODERATELY INTENSIVE ENDURANCE TRAINING (MIET)

Zone 3 on the flat. Terrain flat/hilly (up to 10% for up to 12 minutes. Intensity on climbs up to zone 4. Try to remain seated, keep cadence

moderate (80-90rpm). Aim is to increase your 'threshold' and improve aerobic fitness.

THRESHOLD TOLERANCE INTERVALS (TTI)

Zone 4 on the flat. Accelerate quickly and hold target intensity for specified duration. Each interval begins as you accelerate. Recover for 5mins at zone 0. Aim is to increase maximal aerobic power, VO2 max and your threshold.

RACE PACE INTERVALS (RPI)

Perceived race pace of zone 4 on flat roads. Accelerate quickly, then hold for 60secs. Ride

WEEK 4

2-3hr LR with TTI 3x5mins
Long ride (zone 1, 3-4 on hills) with shorter threshold tolerance intervals

1hr R Easy spin. Zone 0, avoid hills

1hr SR with 20mins MIET. Steady ride with block of hard tempo. Zone 1, 3-4 on hills

1hr SR with FS 4x10secs. Steady ride with fast sprints from rolling start in moderate gear (53x17). Zone 1, 3-4 on hills, all out on sprints

1hr SR. Steady ride on flatter terrain if possible. Zone 1, 3-4 on hills

REST DAY

1hr30mins R with RPI 3x1min. Moderately hard RPIs. Zone 0, avoid hills

at zone 0 for 5mins to recover; repeat.
Cadence is high (95-120rpm).

FLAT SPRINTS (FS)

Completed within a longer ride. On flat roads, from zone 1 or 2, accelerate rapidly to max sprint effort and hold for 10-15secs. Stand for first 5secs, then return to saddle. Aim to reach max pedalling cadence as quickly as possible while remaining smooth. Recover for 8mins at zone 0, building to zone 1, repeat. Aim is to increase peak power.



Tour O' The
Borders - no Tesco
Metros en route

Tesco Bank Tour O'The Borders



Where: Peebles,
Scottish Borders

When: 9 August

Distance: 74 miles

Price: £58

Sign up: turotheborders.com

Based in Peebles, which hosted the start of the 2013 Tour of Britain, and organised by local riders, this ride centres around three valleys. Climbs include Witchy Knowe, Ashkirk Heights and Berry Bush, but don't be fooled by the cutesy names.

Wiggle Cotswolds Sportive



Where: Cheltenham,
Gloucestershire

When: 15 August

Distance: 40/75/105 miles

Price: £23/£33/£33

Sign up: ukcyclingevents.co.uk

Britain's largest area of outstanding natural beauty is the backdrop for a sportive that starts at Cheltenham Racecourse before heading out into the Cotswolds on rolling roads with challenging but manageable climbs.

New Forest Rattler



Where: Ringwood,
Hampshire

When: 16 August

Distance: 47/82/102 miles

Price: £27/£30/£30

Sign up: newforestrattler.co.uk

The three routes cater for all abilities and mix gradual inclines with short, punchy climbs, but be warned – if you're feeling brave the longer route will take you up Blissford Hill, which spikes briefly to a lung-busting 25%.



Watch out for
ponies on the New
Forest Rattler

UK'S TOUGHEST

HAVE A GO IF YOU THINK YOU'RE HARD ENOUGH

OUR EXPERTS PICK THE MOST CHALLENGING SPORTIVES IN BRITAIN

Saddleback Fred Whitton Challenge



Where: Grasmere, Cumbria

When: 10 May

Distance: 112 miles

Price: Entry closed for 2015

Sign up: fredwhittonchallenge.co.uk

'The Fred Whitton covers some of the hardest and steepest climbs in the UK,' says coach Ric Stern.

'The route goes up Hardknott and Wrynose, which are among the steepest roads in Europe at 33%. You need excellent brakes for the descents. The route is very challenging and should only be undertaken by experienced riders.'



PHOTO: STEVE FLEMING

Wiggle Dragon Ride



Where: Port Talbot, Neath Port Talbot

When: 7 June

Distance: 27/95/140/188 miles

Price: £35/£55/£60/£95

Sign up: humanrace.co.uk/cycling

One of the UK's oldest and toughest sportives, the 188-mile Dragon Devil route – which coach Will Newton describes as 'insane' – takes in some of the UK's longest and most arduous climbs, including the Black Mountain and Devil's Elbow.



Deloitte Ride Across Britain



Where: Land's End to John O'Groats

When: 5-13 September

Distance: 966 miles

Price: £950 (Scotland only)/£1,150 (England only)/£1,600

Sign up: rideacrossbritain.com

A multi-day event averaging 160 miles a day, with 15,000m of ascent over nine days – equivalent to 13 times up Alpe d'Huez. 'This is not for beginners,' says coach Ian Goodhew, somewhat unnecessarily.

Action York 100



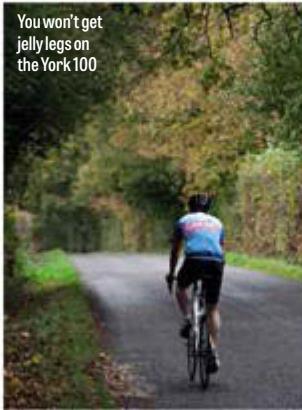
Where: Heslington, York, North Yorkshire
When: 16 August

Distance: 40/67/102 miles

Price: £30 fundraiser/£55

Sign up: action.org.uk/york-100

This fundraiser for Action Medical Research, which helps sick children, is backed by British cycling legend Chris Boardman. An ideal sportive if you want to ride a long distance without your legs turning to jelly.



Tour de Mon



Where: Holyhead, Isle of Anglesey
When: 23 August

Distance: 6/40/75/103 miles

Price: £32/£36/£40

Sign up: tourdemon.co.uk

The island of Anglesey is perfect for beginners. Though challenging on the longer distances, it's relatively flat and you can enjoy views of the coast. The Tour de Teulu six-mile option is suitable for children accompanied by adults.

Roof of England Sportive



Where: St John's Chapel, Co Durham
When: 30 August

Distance: 31/53/89 miles

Price: £25

Sign up: roofofenglandcycling.co.uk

As with most sportives, the shorter events are kinder on the legs, with fewer climbs, but the 89-mile Winking Sheep has 2,752m of ascent. Just don't get distracted – the route passes 30 pubs and cafés.

Wiggle Exmouth Ex-Terminator Sportive



Where: Exeter, Devon

When: 22 August

Distance: 42/60/93 miles

Price: £23/£33/£33

Sign up: ukcyclingevents.co.uk

This event starts at the Westpoint Arena, home to the Devon County Show, before taking you up and around Exmouth towards Honiton and Cullumpton. We can't guarantee sun, but there is sea and sand along Sidmouth front.

Pinewood Climbs



Where: Holt, Norfolk

When: 23 August

Distance: 30/60/90 miles

Price: £15/£20/£25

Sign up: cyclesportivesuk.co.uk

The organisers themselves admit Norfolk isn't home to the steepest of hills, so they make up for that by going up them lots of times. You can choose between one, two or three circuits of a 30-mile course that takes in 10 climbs per lap.

The Hertfordshire 100



Where: Hatfield, Hertfordshire
When: 30 August

Distance: 30/64/100 miles

Price: £18/£20/£20

Sign up: sportiveuk.co.uk

Whichever route you choose, the Hertfordshire 100 has a sting in the tail. A series of short, sharp hills known as Little Switzerland will spit you out over the finish line, so be sure you've trained for this before choosing your distance.

09

SEPTEMBER

PHOTO: MICHAEL ORANGE PHOTOGRAPHY



Enjoy the rolling terrain of the Wolds on Le Petit Grand Prix

The Southern Sportive



Where: Petersfield, Hampshire
When: 13 September

Distance: 44/69/96/119 miles
Price: £26/£28/£29/£30

Sign up: southernsportive.com

With 1,150m of climbing, the Southern Sportive around the South Downs in Hampshire is challenging enough if you go for the 96-mile option, but new for this year is the even tougher 119-mile Wilier Gauntlet – a real test of endurance.

Bike Oxford



Where: Oxford
When: 13 September
Distance: 20/50/80 miles

Price: £16/£28/£33
Sign up: bikeoxford.co.uk

Exact routes are to be finalised but the 2014 event passed under the historic Magdalen Bridge before heading out to the Cotswolds, passing through Hook Norton, Chipping Norton and Woodstock. The roads are mostly flat so expect a fast pace.

Le Petit Grand Prix



Where: Lincoln, Lincolnshire
When: 6 September

Distance: 35/51/81/106 miles
Price: £20/£27/£27/£27

Sign up: itpevents.co.uk

The little brother of June's Championship Sportive. The longer routes are still a challenging tour of the Wolds, so conquer this and you'll be ready for the main event in 2016, which features Roubaix-style cobbles at the finish.

Manchester 100



Where: Manchester
When: 7 September
Distance: 64/100 miles

Price: £20

Sign up: bike-events.com

Join 3,000 riders in raising money for the Christie Hospital cancer care and research centre. Starting and finishing at Wythenshawe Park, the route heads through Delamere Forest to the halfway point at Nantwich for a very civilised lunch stop before the return leg.



Dreaming spires meet Lyera and carbon at Bike Oxford

Cambrian Coast Sportive



Where: Aberdovey,

Gwynedd

When: 19 September

Distance: 31/62/90/101 miles

Price: £19/£27/£29/£29

Sign up: welshcyclingevents.co.uk

Options range from the flat, family-friendly 31-mile Fun Route to a new addition for this year, the 90-mile Long Route, which is only slighter shorter than the 101-mile Big Dog Route. Both take in Bwlch y Groes, a leg-shredding climb over the second highest pass in Wales.



09

SEPTEMBER

Wiggle New Forest 100 Sportive



Where: Ringwood, Hampshire

When: 19 & 20 Sept

Distance: 54/81/100 miles

Price: £26/£81/£100

Sign up: ukcyclingevents.co.uk

If you miss out on Saturday's event, don't worry – they do it all again the next day. The hills are challenging but short, and the three courses cater for all abilities, so everyone can enjoy the views of the New Forest on quiet country roads.



Quiet roads and gentle climbs on the New Forest 100

Velo29-Altura White Horse Sportive



Where: Nunthorpe, Middlesbrough

When: 26 September

Distance: 30/61/77 miles

Price: £15/£25/£25

Sign up: velo29events.com

The unpopular 'Grave Yard' section has been dropped from this year's route (bravo!), but there are still plenty of climbs, including Carlton and White Horse Bank, as well as some fast descents and a spectacular 15-mile stretch to Osmotherley.

Isle of Man CC



Where: Douglas, Isle of Man

When: 26 September

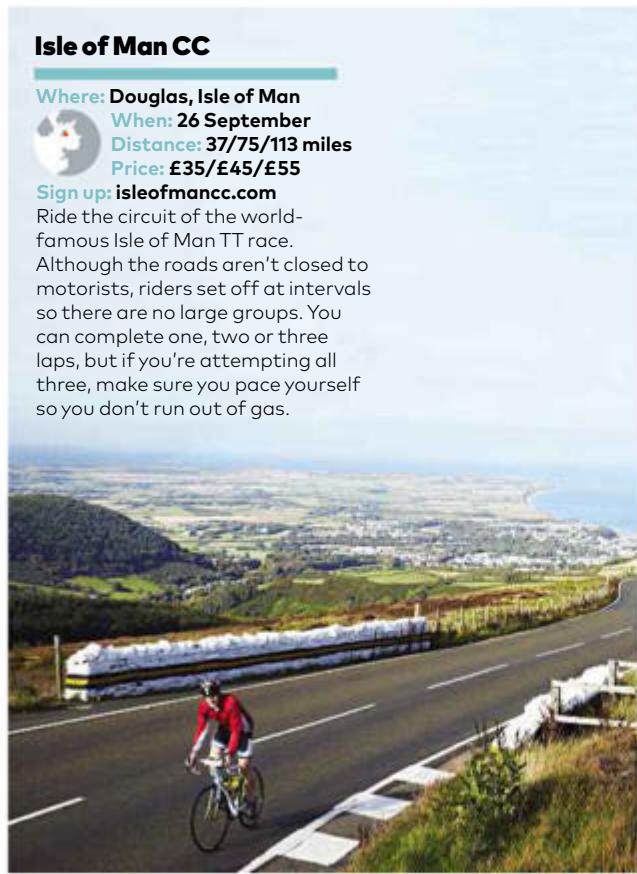
Distance: 37/75/113 miles

Price: £35/£45/£55

Sign up: isleofmancc.com

Ride the circuit of the world-famous Isle of Man TT race.

Although the roads aren't closed to motorists, riders set off at intervals so there are no large groups. You can complete one, two or three laps, but if you're attempting all three, make sure you pace yourself so you don't run out of gas.



London Legacy Sportive



Where: Lee Valley

VeloPark, London

When: 27 September

Distance: 42/92/17 miles

Price: £40/£46/£48

Sign up: humanrace.co.uk/cycling

Ride a big chunk of the 2014 Tour stage three from Saffron Waldon to the finish on a lap of the Olympic velodrome, while raising funds for Access Sport, who use sport to transform lives in disadvantaged areas.

Bristol 100



Where: Blaise Castle, Bristol

When: 27 September

Distance: 25/60/100 miles

Price: £24

Sign up: bike-events.com

Starting at Blaise Castle, the Bristol 100 skirts the edges of the Cotswolds before heading towards the Severn and making its way down the flats of the Severn Valley. A relatively relaxed way to end your season if you're not planning any events beyond the end of September.

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10 OCTOBER



If you have to walk, at least you can enjoy fine views on the Land's End 100

Land's End 100



Where: Marazion, Cornwall

When: 4 October

Distance: 46/64/100 miles

Price: £23/£27/£31

Sign up: tempusleisure.org.uk

Few parts of the UK can match Cornwall for natural beauty, and the Land's End 100 offers plenty, with routes taking in the north coast, the Lizard Peninsula and Cape Cornwall. The only things that might distract you from the landscape are the hills.

Cotswold Edge Sportive



Where: Wotton-under-Edge, Gloucestershire

When: 11 October

Distance: 49/69/93 miles

Price: £22/£23/£24

Sign up: southernsportive.com

This late-season event takes in the steep, twisting and little-travelled roads of the western edge of the Cotswolds, rewarding your efforts with fine views over the Severn Estuary and the Forest of Dean. Just hope it's a clear day.

Trent Valley 100



Where: Gainsborough, Lincolnshire

When: 18 October

Distance: 64/100 miles

Price: £18.75

Sign up: sportivehq.com

There's a party atmosphere at the Trent Valley 100 as all riders share the road for the first 35 miles before the two routes split. The climbing starts soon after but even the longer route only ascends 488m, making this a gentle end to your season.

Lakeland Classics: Ride of the Fallen Leaves



Where: Coniston, Cumbria

When: 18 October

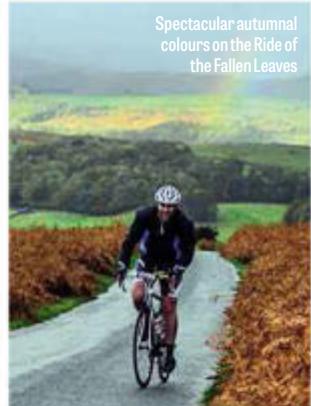
Distance: 61 miles

Price: £25

Sign up: seismic-events.co.uk

The third and final Lakeland Classic takes place in southern Lakeland, with 1,900m of ascent over its 61 miles. The autumn scenery can be stunning, but be prepared for slippery road surfaces as leaves and rain can combine to make things tricky.

Spectacular autumnal colours on the Ride of the Fallen Leaves



Autumn Riser



Where: Fareham, Hampshire

When: 25 October

Distance: 46/84/125 miles

Price: £27/£30/£30

Sign up: cyclofanatic.co.uk

Based in the Meon Valley, the Autumn Riser takes you around the rolling South Downs, past the remnants of an Iron Age fort and up some challenging climbs. Be aware that parts of the route are on narrow, single-track lanes so ride carefully.





Polocini Winter Warmer



Where: Romiley,
Stockport

When: 1 November

Distance: 64 miles

Price: £20

Sign up: polocini.com

This late season sportive has two key attributes: first, the opportunity to warm up at the Polocini Coffee Shop in Romiley before starting. Secondly, the course is mostly flat, with only three hills worth the name.

Essex Season Ender



Where: Ilford, Greater London

When: 8 November

Distance: 42/72 miles

Price: £18/£20

Sign up: sportiveuk.co.uk

Based at Redbridge Cycling Centre, with views over the City of London, the Season Ender takes in long, flat sections that allow you to really build up speed, as well as sharp hills such as Hoe Lane, ending with a lap of the 1km Redbridge circuit.

Evans Cycles Ride It Cheltenham



Where: Cheltenham,
Gloucestershire

When: 15 November

Distance: 35/58/77 miles

Price: £18.50

Sign up: evanscycles.com/ride-it

Yet another sportive that visits the glorious Cotswolds with a course that takes in climbs up Cleeve Hill and the challenging Sudeley Hill. The well supported event also offers free Garmin hire, High5 feed stations and mechanical support.

Wiggle Royal Flyer Sportive



Where: Fakenham,
Norfolk

When: 22 November

Distance: 43/70 miles

Price: £33/£33

Sign up: ukcyclingevents.co.uk

Centred around the Sandringham Estate, this is a regal way to finish your season. Low difficulty levels mean it's a chance to either take things easy or set yourself a target against the clock before you start winter training for 2016.



BEST OF EUROPE

Garmin Velothon Berlin



Where: Berlin, Germany

When: 31 May

Distance: 37/75 miles

Price: €62/€68

Sign up: garmin-velothon-berlin.de

It would be wrong of us to send you off to the Continent without first warning you that in Europe, sportives are more like races than in the UK. The Velothon Berlin is a prime example, taking place on the same course as the pro race. No significant climbs but open, flat and very fast.

Granfondo Stelvio Santini



Where: Bormio, Italy

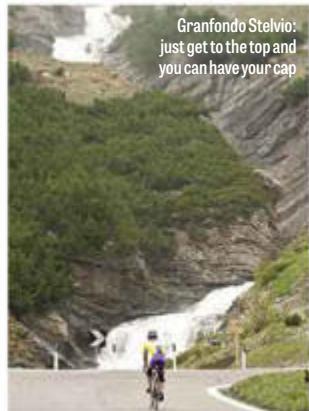
When: 7 June

Distance: 37/86/94 miles

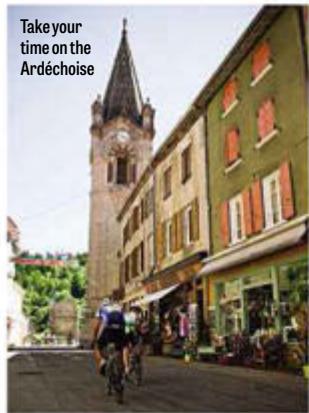
Price: €45

Sign up: granfondostelvio.santini.com

You'll scale the Stelvio (2,758m) and Mortirolo (1,727m) climbs on this course, while up against some of the Europe's feistiest – sportive riders. On the plus side, you do get a free jersey, and a cap if you make it out alive.



Take your time on the Ardéchoise



L'Ardéchoise



Where: Tournon-sur-

Rhône, France

When: 20 June

Distance: 136 miles

Price: €58-€123

Sign up: blog.ardechoise.com

This sportive really is what you make it – as well as a one-day 136-mile route, there are two, three and four-day options. The day-long event takes in 10 cols with 4,270m of climbing, but you can cut short the route along the way. It's timed, but go at your own pace if you choose.



Quebrantahuesos



Where: Sabiñánigo, Spain

When: 17-21 June

Distance: 124 miles

Price: From £545 (four-night package inc transfers and shared four-star B&B accommodation)

Sign up: traininspain.net

The Quebrantahuesos is a vulture, also known as the bone breaker, and lends its name to this sportive, which starts and finishes in Sabiñánigo. It's hugely popular but Train In Spain still has places, so get in quick.



Vulture culture up in the Spanish hills

L'Eroica



Where: Gaiole in Chianti, Italy

When: 4 October

Distance: 24/47/84/130 miles

Price: TBA

Sign up: eroicagaiola.it

The Italians know how to celebrate cycling, and L'Eroica – which translates as 'heroic' – celebrates classic bikes and kit of the past while punishing you with more than 3,700m of ascent over rough, gravelly and dusty roads. Tough but well worth the effort.



Haute Route Pyrenees

Where: Anglet to

Toulouse, France

When: 15-21 August



Distance: 503 miles

Price: €1,600

Sign up: hauteroute.org

This seven-stage, week-long trek over the Pyrenees is more of an expedition than a sportive, and to give it that pro feel there is even a non-timed parade in Anglet. And it's tough – the route takes you over famous cols such as the Hautacam (1,635m), Superbagnères (1,791m) and Tourmalet (2,117m).



Despite appearances, L'Eroica is far from child's play

PHOTOS: TOM MILES, GEOFF WAUGH, DAN MILNERPAUL CALVER, MANU MOLLE, PETE WEBB

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